THE ALABAMA
MEDICAL JOURNAL.

VOL. 18. JUNE, 1906. NO. 7

Original Communications.

THE RELATION OF TRAUMA TO NEURASTHENIA AND ALLIED NEUROSES.*

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There is perhaps no subject of more vital interest and none I am sure of more importance to the railway surgeon than that of the various neuroses and psychoses which not infrequently follow railway accidents. When your president asked me to prepare a paper for this meeting upon the subject of the Traumatic Neuroses I felt some hesitation in undertaking what appeared to me to be a difficult task on account of the fact that I did not know in what respect the neuroses in which trauma was the chief etiological factor differed from those produced by other causes. I am convinced, however, that a consideration and a full discussion in a meeting of railway surgeons will prove profitable to the surgeon as well as to the general practitioner. You gentlemen who represent the railroad companies in an official capacity are often called upon and it frequently becomes your duty to examine parties who have received injuries and to express an opinion as to the significance of the disturbances of nerve function which follow trau

*Read before the Railroad Surgeons' Association of the Central of Georgia Railroad, at Birmingham, Ala., April 17, 1906.

mata, especially when they occur from accidents upon railways. Aside from the medico-legal questions involved, to which I shall give due consideration, it is important that the surgeon should be able to differentiate the nerve symptoms which are due to organic lesions from surgical injuries and those which are purely functional in character. As a matter of fact in many cases there is a combination of the two conditions. The trend of opinion in modern neurology today is to deny the existence of any special nervous disease produced solely by injury. Undoubtedly, however, there are many cases, and we have all seen them, in which following an accident attended by shock, both mental and physical, and associated with fright where, after a variable period, a complex group of nervous symptoms develops and without any visible or objective sign of injury and presenting no symptoms pointing to any organic or structural lesion in the nerve centers or peripheral nerves. These are a class of cases which properly belong and are distinctive enough to be termed the traumatic neuroses. Unfortunately they are often mixed up with damage suits and this renders their diagnosis more difficult.

I shall not attempt in this paper to give anything like an exhaustive discussion of the various neuroses, but shall simply endeavor to point out some of the salient features in the etiology and symptomology of these conditions and of the medico-legal qestions involved. It must be remembered at the outset that the chief abnormalities of the nervous system following accidents are characterized by a psychic disturbance which is the predominating element. In addition to the manifestations of physical and nervous weakness, a peculiar mental state, an emotional disturbance characteristic of hysteria and an over-sensitiveness characteristic of neurasthenia are always observed. The patient is easily fatigued and easily discomforted by any mental or bodily exertion.

These conditions are now recognized as psycho-neuroses on account of the psychic symptoms which predominate and which color the whole clinical picture. Among the exciting causes of nervous diseases trauma occupies a foremost place. A severe blow on the head may produce less serious effects than an intense fright, while injuries of all kinds about the head and back, accompanied by shock, may lead to pro-

found nervous and mental deterioration. The delicate neurons may be primarily or secondarily disturbed so as to interfere with their important functions. The more serious injuries produce lesions in the nerve centers as in cases accompanied by hemorrhage, laceration of nerve tissue, compression and inflammation, while in less serious cases accompanied by shock and concussion the neuron is jarred and disturbed and its nutrition and functional capacity is impaired, and as a result the various neuroses and psychoses are produced.

The question of the relation of shock and concussion as a factor in the development of the neuroses has narrowed itself down to this single proposition: Can there be a disease from shock or other accident to the nervous system and yet no change be found in the tissues of the body? The answer to this question has caused in the past much discussion. Its consideration is now chiefly confined to the courts of law where it is heard in connection with suits for damages for personal injury. It must be admitted that a condition in which manifestations of disease develop, marked chiefly by subjective symptoms, in a person who has recently passed through a severe railroad accident, and who shows nowhere in his person any visible sign of injury, opens the way for all kinds of simulation and fraud. In the damage suits for personal injury it is to the interest always of the plaintiff to establish the reality of his trouble while the defendant company undertakes to controvert this fact and even to establish simulation. In the investigation of an accident case complicated by litigation, two important questions must be determined. First, has a disease followed the accident or is the complainant a malingerer? The proper solution of these difficult problems requires not only the most careful physical examination along certain technical lines, but detective work of all kinds.

There has been much confusion upon this subject due for the most part to the various publications which have appeared from time to time in medical literature. The attention of the profession to this class of cases, first called by Mr. Erichson's work in 1871 upon Spinal Concussion, in which he reported 53 cases resulting chiefly from railway accidents and presenting all kinds of lesions.

Mr. Erichson believed that in the accident cases which showed no

visible sign of injury the concussion produced early molecular changes and secondary inflammatory degenerative changes in the spinal cord. In other words he regarded the condition as a meningo-myelitis. On account of this publication "concussion of the spine or railway spine" was considered a distinct disease. Auti-corporation attorneys used it as proof in their suits for damages for personal injuries. Even to this good day, when many of the theories and conclusions of Mr. Erichson have proven to be erroneous, the book is sometimes quoted as authority upon the subject.

In 1883 a book appeared by a Dr. Page, a railroad surgeon, where an effort was made to counteract the teachings of Erichson. In 1889 Oppenheim in Germany made a careful study of this class of cases and differentiated those cases in which the symptoms were due to organic lesions and those not marked by any gross changes. About the same time Charcot and his pupils demonstrated that the symptoms in those cases not due to organic lesions were precisely the same as had been observed in neurasthenia and hysteria. It must be remembered that in the days when Erichson and Page wrote neuro-physiology and neuro-pathology was not as well understood as today and that the symptom complex in hysterio-neurasthenia was not as well worked out.

The terms "Railway Spine and Spinal Concussion" have unfortunately been used to cover all morbid conditions following severe injury. It is practically admitted by all neurologists that functional nerve disorders do frequently follow accidents but that they are not by any means new diseases. These nervous manifestations belong to the class of psycho-neuroses although frequently in the beginning or later they are complicated with muscular meningeal, inflamatory, sclerotic, or other degenerative changes in the brain, spinal cord, peripheral nerves and sympathtic system. There are many types of the traumatic neuroses and there is very great variability in the symptoms. Among the first may be mentioned the cases with gross surgical lesions, including fractures, dislocations, hemorrhages, compressions of the cord, muscular strains and sprains of the back, and secondly, the neuroses, or psycho-neuroses classified in modern neurology as neurasthenic, hysterical and hypochrondrical cases. It is admitted today by

all neurologists that physical and psychic shock can and often does produce an abnormal condition of the nervous system, sufficient to be termed disease. When there is no visible or other evidence of surgical injury the clinical picture is invariably that of hysteria or hystero neurasthenia of variable degree. These troubles are usually termed functional because we do not know very accurately the changes which really take place. In all neurasthenic states there are undoubtedly changes in the cell. Shocks accompanied by severe mental or physical strain effect the nutrition of the nerve cell and manifest changes occur in the cell body and its processes.

While it must be admitted that a severe accident may cause de novo, a profound neurosis, at the same time there has not been in the majority of cases a state of ideal health, preceding the injury. Accident cases sufficiently severe to lead to profound nervous disturbances commonly produce a severe physical lesion of same sort. These are the organic cases, those occurring in individuals in perfect physical and mental vigor at the time of the accident. In many cases the patient is of a neuropathic constitution or has recently been a sufferer with neurasthenia or hysteria or is already on the verge of a nervous collapse from alcoholic or other poisoning, the accident simply lightens up a profound psycho-neurotic state. In a case of this kind the accident may be said to be the exciting although not the primary cause, and yet the results may be lasting and degenerative states may supervene. The symptoms which may accompany the traumatic neuroses need not detain us very long as they are well known and do not differ essentially from those produced by other causes. If it were not for the fact that they are so often complicated with damage suits they would not need discussion as separate and peculiar troubles. The average lawyer or juror cannot be made to understand what is meant by a functional disease and is disposed to ignore all subjective symptoms. Science accepts as a fact that there may be functional disturbance in a nerve cell without any manifest changes which can be discovered by the senses. Recent investigations, however, in neuro-pathology have demonstrated that the neuroses are due to molecular, chemical or nutritional changes in the neurons. To deny the existence of the neuroses simply because we cannot describe very accurately the changes

which occur is as untenable as to deny the existence of certain psychoses because no known pathological changes have been observed.

In a medico-legal investigation in this class of cases two questions should be carefully considered. Is the complainant suffering with a neurosis or is the condition simulated, if the former exist, regard should be had as to the relations of the disease to the accident as one of cause and effect. The previous history of the patient should be gone over to determine the anticedent conditions of health. In the detection of simulation a knowledge of the symptoms in this class of cases and natural shrewdness in making the examination is essential.

Each case must be carefully studied by itself and should first be investigated from a surgical point of view and then from a neurological one.

Consider the whole clinical picture and analyze the various manifestations of disease in detail. It is to be remembered that some simulation is common in hysterical cases, and yet the patient may not be dishonest. There is also a high degree of susceptibility to suggestion. It is best in all hysterical cases to avoid litigation and recommend prompt settlement. The malingerer can imitate an organic disease much easier than a neurosis, on account of the variability in the symptoms. No simulator is so well posted in the manifestations of disease to be able to present a complete and typical picture of a neurosis. He will either over-act or under-act his part. There are many methods used in detecting the malingerer. Electricity, physic shock and anaesthesia and the state of the pupils will serve when in doubt in differentiating functional from organic disease, and distinguishing either from pure simulation.

A few words now in closing in reference to the symptom complex and prognosis in these traumatic cases. The symptoms may develop immediately after the accident, but days or weeks may elapse before they begin to manifest themselves. Pain is the most constant and chief subjective symptom. In railroad cases it is complained of chiefly, in the back, accrum and occipital region and is often due to a strain or bruise which has been received. There is a restraint in all active movements, the patient endeavoring to fix the painful point. In a short time the patient observes that he is more nervous and be

comes despondent which shows itself in his facial expression. He is irritable, sensitive and emotional and tires easily after any bodily or mental exertion. He indulges in constant introspection and is full of morbid fears. He frequently complains of unpleasant sensations in the head and back and also a sensation of numbness in the extremities. Among the most prominent neurasthenic phenomena in addition to the nervous emotional condition are insomnia, general muscular weakness and in the majority of cases a pronounced increase in the tendon reflexes confined sometimes to the side upon which the injury has occurred. There is also more or less cardio-vascular disturbance indicated by increased pulse rate and an abnormal excitability of the cardiac nervous apparatus, a condition in which slight exertion or mental influences acelerate the pulse. There are sometimes vaso-motor symptoms as indicated by flushing of the face and cyanosis in circumscribed areas. As the nervous symptoms increase a fine tremor in the hands may be observed. Examination by a physician reveals at this time chiefly the subjective symptoms which have been mentioned. In rare cases we find hysterical paralysis manifesting itself in paraparesis or paraplegia, but more frequently hemiparesis or hemiplegia accompanied by quantitative disorders of electric excitability. Sensory symptoms are often prominent--pain, paræsthesia, hyperæsthesia and disturbances of the special senses. These are of the most varied kind and are usually noted upon the side of the body affected by the injury. Hyperasthesia in circumscribed areas and anaesthesia in larger areas is often noted. Concentric contraction of the visual field is commonly present involving both eyes. The locomotion and gait of the patient is often affected, but there is nothing very characteristic about it. The gait is often impaired on account of pain and stiffness of the back especially when the case is complicated with muscular strain, the legs are held in a stiff position resembling the spactic gait, although the toes do not touch the ground and in the recumbent position there is no muscular rigidity. The pupils are sometimes dilated but react normally to light. Nutrition often suffers a good deal and the patient loses in weight. He may complain of difficulty in emptying bladder, obstipation and impotency but these symptoms cannot be determined objectively. In addition to the symptoms mentioned there

may be symptoms which are due to some local injury. The description which I have given of the symptoms apply to the severe cases. There are many mild cases where subjective symptoms alone are present, as a complaint of pain, general nervousness, hyperaesthesia and loss of strength. The examination therefore is often negative so far as any objective signs are concerned, and many of this class are pure malingerers. The prognoses of the traumatic cases is always important because they are almost invariably complicated by litigation. Many of them begin to improve after damages are awarded and a certain proportion entirely recover. The subjective symptoms are largely increased by anticipation of litigation, numerous examinations and suggestions from attorneys and physicians, and the natural tendencies to exaggeration. Psychotherapy is a very potent curative agent when administered by a court as well as when given by a physician. Many cases do not recover after the award of damages, some grow worse and develop in a year or so into serious organic trouble. The neuropathic constitution always renders the prognosis unfavorable.

REMARKS ON THE "PLASTER OF PARIS DRESSING."

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Probably a majority of the physicians and certainly every surgeon who has practiced his profession for a length of time, has had occasion to use the plaster-of-paris dressing. Doubtless many of those who have used it have had more or less trouble in its application and necessarily have gotten varying degrees of success by its use. The plaster bandage is highly appreciated by those who are most familiar with the proper technique of its application. In it they see many virtues which when accurately employed always reward them creditably and satisfactorily in their results. We know that the plaster-of-paris' main field of use

fulness is in surgery, and here principally for the purpose of immo bilizing parts, as in bone and joint diseases, fractures, dislocations, and further as a model for various abnormalities of the body.

To a "looker-on" it seems simple enough to apply effectually a plaster bandage; but when a personal attempt is made to do so it is then found not to be so easily done.

It requires, as in other things, a goodly experience and familiarity with technique to bring about a successful result. A few surgeons condemn the use of the plaster dressing for any purpose, making various assertions just why they disbelieve in its virtues. Some say it requires too much time for a plaster bandage to harden, and that it absorbs moisture too readily. But they forget to take into consideration just why this may be true in their hands. Nine times out of ten it can be assigned to the use of inferior bandages which will not set rapidly or firmly and will therefore fail to give proper fixation. The plaster bandages prepared by trustworthy manufacturers almost always come in hermetically sealed tin cans; the packages are lined with glazed paper which prevents the plaster from coming into direct contact with the air, thereby preserving them. The bandage if exposed to the air long at a time will never harden well or give satisfactory results.

Another point to consider is that inferior bandages are usually sized with glue which will interfere with the setting of the plaster. The best quality of bandages have their crinoline sized with starch which does not in any way prevent the plaster from hardening rapidly, which should take place in from 15 to 20 minutes. Better still are the fresh hand-made bandages which I remember, as a hospital resident, using every day and never meeting with any trouble in the setting of the plaster.

Right here I will say that a good plaster bandage should be made out of cross-barred muslin, or crinoline, which has been well washed, getting rid of any of the superfluous sizing material. When this becomes dry tear your strips from (3) to (4) inches wide and about (3) yards long; then draw them carefully through a tray full of fresh well-ground plaster-of-paris which will fill the meshes of the cloth. In

applying the bandages place them one at a time on end in a bucket of warm water always completely submerging the bandage. You will notice bubbles of gas escaping and as soon as they cease the bandage is ready for use. Squeeze out all superfluous water and place in the bucket another bandage which will likely be ready for use by the time you have applied the first one.

The addition to the water of a little salt is a remedy employed by many to cause the plaster to harden quickly, but this should never be done because it will render the plaster brittle and make your cast a poor support. Excoriations do follow the use of some plaster casts and that has been ground for another objection to be made against the plaster. When any excoriations do occur they prove rather difficult to heal and of great worry to the patient; but as a rule no fears should justly exist in this regard. If a plaster bandage is properly applied excoriations rarely ever occur. Remember that if the parts to be bandaged are carefully and amply protected by gauze bandages and a little cotton no trouble will likely ensue. It is then a question of faulty technique when you do get bad excoriations.

The "plaster-of-paris spica" is about the most commonly used of the plaster bandages. This spica bandage is best applied on a hip-rest. Extension is made by an assistant at the shoulders of the patient and another at the foot on the affected side, thereby, with the aid of the hip-rest, securing a good position for the application of the plaster bandage.

It is wise to apply a plaster cast as nearly skin fitting as is possible to be done, especially above and below joints; each plaster being rolled around the part with the palm of the hand, keeping the bandage in close contact with the body and bearing in mind to keep it even and without tension. Use the other hand to rub each layer and thus smooth out all inequalities.

In no field of usefulness is there to be found anything that will compare to the plaster spica as a wonderful reliever of night cries in morbus coxae and it is right here that is found its most serviceable employment.

This statement is likewise true in regard to vertebral tuberculosis.

No protective support can equal the plaster jacket in producing almost positive fixation of the vertebral column, the very thing desired in most spinal diseases and injuries.

I believe that a suspension apparatus with the head halter is the truest and best friend to you when applying a jacket. The halter is made so that it may be adjusted to fit a head of any size or shape, and with the compound pulley you can get any amount of extension you may wish.

When for any reason an abdominal support is needed, two or more layers of a two-inch plaster bandage have been used with uniformly good results.

A plaster cast is difficult to remove by the inexperienced at times, and some object to using a plaster cast for this reason. This objection is easily overcome, for by the use of the plaster knife any cast may be quickly and easily removed. Probably the quickest way to take off a cast is to first scrape your line of incision, applying over this line a piece of wet cotton, which has been well soaked in hot water; this will quickly soften the plaster and enable you to cut through the plaster with the knife at a rapid rate.

These few petty disadvantages will not compare with the many advantages the plaster dressings have over any other protective dressing. A patient is always enabled to be out of bed and out of the sick room by the use of the plaster, and this in itself warrants a more frequent employment of plaster dressings. Confinement to bed or to the sick-room is always damaging to the health.

I feel that this point alone merits the time consumed in making these few remarks tonight in favor of the plaster dressing.

I suggest then, to conclude briefly, that by using the best quality of plaster bandages, made fresh every day if possible, by omitting the addition of any salt to the water, by removing the excess of water from your bandages before applying them, by padding lightly all bony prominences, and by rubbing thoroughly each layer of the bandage, you will find the plaster-of-paris bandage to be a thoroughly reliable, efficient, and very often indispensable means of treatment.

RETRO-DISPLACEMENTS OF THE UTERUS WITH REPORT OF OPERATIVE CASES.*

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In bringing before this Society the subject of Retro-Displacement of the Uterus, I assure you that it is with no intention on my part to try and present any new facts in regard to the pathology of this disease, which is making many of our women, especially those of the middle classes, invalids, incapacitating them for the duties which devolve upon them daily, and instead of the bloom of youth, the bright disposition, and the pleasure they once enjoyed in living, we find these supplanted by the worn out pale faced appearance, with weak, aching backs and the constant drain on the system of the leucoreal discharge making death more preferable than the mere existence under these conditions.

Retro-displacements of the uterus in some cases gives rise to no symptoms, but on the other hand it may be classed as one of the greatest afflictions of womankind.

The number of gynecologists that class retro-displacement as a mere coincidence in the life of a woman and not a pathologic condition is rapidly diminishing. It is said that retro-displacement comprises about eighteen per cent. of all gynecological patients, so, taking into consideration the large number that the general practitioner as well as the Gynecologist is bound to encounter, it is well that he devote some of his most valuable time to the consideration of this disease, for, by at least one of the means at our command, he can give back to the sufferer the health she once enjoyed. In a very limited number of cases, I have had the pleasure of once more seeing the woman restored to health and happiness. It has been my misfortune in the past to be compelled to treat quite a number of these unfortunates by other means than surgical, and twelve cases by operative measures. That a few of these cases are amenable to the non-operative treatment I am willing to concede, but I think this number very limited indeed.

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*Read before the Shelby County Medical Society.

We may divide the subject of retro-displacement into those of congenital and acquired origin.

That we may have congenital retro-displacement, no one will deny, as the uterus has been found in a markedly retro-displaced position in the new-born infant, but what is often classed as a case of the congenital type, I think, could have resulted in early childhood. The retro-displacements of congenital origin are said to be from a lack of development of the posterior wall of the uterus, or, the over development of its anterior wall. The treatment of this condition would of necessity be operative.

The acquired variety is due to falls, blows, to violent efforts at lifting, overdistension of the bladder and the accidents of labor, such as lacerations, sub-involution of uterus, etc. The retro-displacements from some of the enumerated causes are brought about in early girl hood, hence in the treatment of this condition our first aim should be to prevent the condition, which may often be done by giving good advice to the mothers as to the care of the girl members of her family, seeing that they indulge in not too violent exercise, that the bladder is emptied so soon as the desire is felt and especially upon retiring at night and that the bowels are kept in a normal condition. Should the child be of a nervous temperament outdoor exercise should be insisted upon.

As to the preventive measures after labor, the doctor should not for one moment consider his duties at an end so soon as the crying babe is brought into daylight, but rather should consider that for the coming month his duties are the more important. First, he should see that all lacerations of perineum are carefully repaired, as the loss of the support of the pelvic floor is one of the most potent causes of retro-displacement. Then we know that sub-involution of the uterus is another probable cause. I think we are all inclined to let our patients up too early after delivery, but this I do not consider as productive of retro-displacements as the practice of keeping the woman on her back during the ten days following confinement.

The weight of the uterus at the time of parturition is about two pounds, as compared to the normal weight of an unpregnated uterus, which is about two ounces. We can readily see the tendency there

would be for the organ to fall posteriorly when the ligaments begin to undergo involution, if our patient is lying on the back. The right and left side alternately I consider the best position for the woman to assume while in bed after a normal labor. It was formerly considered that the best method to cure a retro-displacement was for the woman to become pregnant, and I think that, if the proper care is taken after delivery, this is still a very good method, but it is often impossible for a woman with a marked retro-displacement to become pregnant. After delivery of a patient suffering with a retro-displacement the uterus should be placed in its normal position, the woman instructed to lie on either side, or even on her face, given tonic doses of ergot, and if necessary the uterus held in position by tampons.

DIAGNOSIS.

The diagnosis of a chronic case of retro-displacement is usually a very simple procedure, so this will only be touched upon very briefly. When a patient presents herself to us with the worn out, pale faced appearance, complains of lack of energy, pains in back near sacral region and general pelvic discomfort, we can usually presume that we have a case of retro-displacement with which to deal, but the diagnosis can be positively made by a vaginal, or rectal examination, as the fundus of the organ will be usually found in the hollow of the sacrum. Disuria and constipation are the rule, and often the actions from the bowels will produce acute pain as the hard fecal masses pass over the fundus, where it is in contact with the wall of the rectum and which has usually become much irritated. The passage of a uterine sound to make a diagnosis is to be condemned, for we are informed that much harm has resulted from its use, it being almost impossible to introduce it without introducing with it infective micro-organisms and perhaps wounding the uterine surface, which will serve as an infection atrium, and its use is not essential to a correct diagnosis.

TREATMENT.

As to non-operative treatment of these cases, I have found it very unsatisfactory. It may be that all the cases I have come in contact with have been of the chronic variety and not amenable to other than operative treatment. Most of us agree that it is only the acute cases that we can expect to cure by other than operative means.

My plan of non-operative treatment is as follows: Should the case presented seem to be of the non-complicated variety, I have the patient go to bed, replace uterus and keep it in place by the use of glycerine and ichthyol tampons, change the tampons every second day and at the same time give a douche of about two or three gallons of water as hot as it can be borne. Keep patient in bed for about three weeks and have her lie on back as little as possible. I have tried quite a number of pessaries and think it much better to leave them out of the case altogether, the gauze tampons answering all requirements and being much more comfortable to the patient. I also give the woman tonic doses of ergot, or iron, quinine and strychnine, to endeavor to build up her general health and tone up her muscular system. At the end of one month I usually dismiss the case very little or no better than when the treatment was begun.

We are told that this form of treatment is contraindicated where we have endo-metritis, metritis or any inflamed condition about the tubes, ovaries or any adhesions. I find it very difficult at times to tell if any of these conditions exist, and in fact they usually are present, for we see very few acute cases, the woman putting the matter of consulting a doctor off until the condition has passed into the chronic stage. We also read by eminent men that, in the non-operative treatment of these cases, each case is a law unto itself, and I think in my treatment I have always employed the law that should have been employed in some other cases.

OPERATIVE TREATMENT.

In my very limited experience with the operative treatment of retro-displacement, it has proven eminently satisfactory, accomplishing all that could be desired in twelve cases, three of which I beg leave to report, as they have borne healthy children and the labors seem to be devoid of complications.

Briefly reviewing the anatomy of the supports of the uterus, first we note that it is a suspensory organ and is capable of considerable range of mobility. Its principal support is derived from the broad and utero sacral ligaments as well as its attachment to the bladder anteriorly, while the round ligaments serve as guy ropes, together with the pressure of the intestines on the posterior surface of the uterus to

hold it in its normal position. It was formerly thought that the uterus was supported by a column from below, but Emmet demonstrated that this idea was fallacious.

The fundus is free and presents a surface that would seem to suggest a method by which the uterus can be brought forward attached in its normal position and retained there, and although I have abandoned this method of correcting retro-displacement, it is to this method that I can attribute the cured condition of six of the cases reported, three of which afterward gave birth to healthy children. My reasons for abandoning this method was, first that although the results from vertral suspension in my cases were good, the limited number of cases in which I had employed it were not enough to prove anything or to draw any conclusions; second, that as nature intended that the uterus should be a freely movable organ we should not in our endeavors to correct a deformity substitute another; third, the danger of intestinal obstruction following; fourth, the danger of future labors; fifth, as the parietal peritoneum receives its nerve supply from the spinal cord direct, the pain from adhesion involving the parietal peritoneum is usually very great, and while this did not occur in any of the cases I have reported, yet we know this to be very probable; and last I think we have a more scientific operation confined to the round ligaments. The following is a report of the three cases in which I had the privilege of observing the effect of labor after a ventral fixation:

Case 1. Mrs. A came to me complaining that her health for the past few years had completely failed. Her history was that up to the birth of twins some two years previous she had been in perfect health. Her labor was very protracted but she was out of bed after six days of confinement, and on the tenth day rode in a buggy for ten miles, taking with her the babies. Both of her babies died from the exposure of the trip. She complained of very severe pain at each evacuation of bowels, suffered with disuria and frequent urination. She had lost much flesh and presented the usual worn out, pale faced appearance so characteristic of retro-displacement. She was unable to stand on her feet for any length of time or perform any kind of house work. She had been under the treatment of a physician for the past year, but her condition had grown progressively worse. Her temperature was 99 degrees, pulse 110, leucocytes 7200, hemoglobin 70 per cent.

Examination per vagina revealed a mass in the hollow of the sacrum which proved to be the fundus of the uterus, which was very tender to the touch, and, as it was in close contact with the rectal wall, explained the severe pain with which she suffered from the movements of bowels, the hard masses pressing against this inflamed surface. Advised operation which was accepted, entered abdomen through median line, brought uterus in about its normal position and did a ventral fixation. Recovery and results in this case were all that could be desired. Her health was restored, she gained rapidly in flesh, and in twelve months gave birth to a healthy boy. The labor seemed normal and the uterus remained in its natural position after birth of child.

Case 2. The general conditions of this case were about the same as in the first, except that she gave a history of a severe case of puerperal infection following a delivery some two and a half years previous. At the time of operation patient only weighed 98 pounds. After getting in the abdomen it was found that the left tube was bound down by adhesions, the ovary enlarged and cystic. Removed both of these structures and did a ventral fixation. Woman left hospital in two weeks, in sixty days had gained 22 pounds in flesh, and in fourteen months was delivered of a perfectly formed boy baby. The labor was devoid of complications and the uterus remained in its normal position after delivery. In this case I could see the band of adhesions make traction on the abdominal wall during the expulsive pains of the second stage of labor.

In case No. 3 there was nothing interesting in the history and the labor was normal, she having given birth in the course of time to a boy. Now I do not claim that the operation for the correction of the retro displacement will result always in the woman giving birth to boy babies, as it did in my three cases, for if so, I think the operation would be exceedingly popular.

The operation of ventral fixation is still the choice of many eminent operators. I only recently noticed the report from Johns Hopkins Hospital of one thousand cases of ventral fixation performed at that institution, and in this, the writer claims, that if properly performed the operation of ventral fixation was surpassed by none.

Dr. C. E. Herman of London says that after ventral fixation the

labors are normal in 94 1-2 per cent. of all cases, and that he considers it the operation of choice, but considering the fact that nature has intended that the uterus should be a freely movable organ, would lead us to seek for a method that would nearer resemble nature's work after it is completed, and when possible the operation of shortening the round ligaments would seem superior to all others, as we put the pull exactly where nature intended it should be. During a two-weeks' stay at Dr. Mayo's clinics, I had the pleasure of seeing him do quite a number of these operations, both the modified Alexander externally, and the internal Alexander. In all uncomplicated cases he performs the Alexander with a slight modification. Many of the operations for shortening the round ligaments have proven not to be successful, the cord again stretching and the uterus going back into its former position of retro-displacement.

If in dealing with the round ligaments, we will take into consideration the minute anatomy of the structure dealt with, we can then do away with its weakest portion. We are informed that the round ligament is composed of three distinct and separate portions; the outer third being composed only of connected tissue, the middle third of fibrous connected tissue, and the internal third of muscle, fibrous and connective tissue. It increases in size from without inward, and in displacements we do not find a diminution in size of the internal third, very slight in the middle third, but marked diminution in the size of the external third. This may be accounted for by the minute anatomy of the cord, connective tissue, being much weaker than fibrous or muscular, or rather the combination of the two. Then it would seem that in our operations we would endeavor to get rid of the weakest portion, which is the outer third.

When in Chicago I observed that Dr. Murphy simply folded the round ligaments over the anterior surface of the uterus and attached them. While I would not wish to appear in the light of presuming to criticise so eminent an operator as Dr. Murphy, it does seem that here, as in ventral fixation, we get the pull from the uterus where nature did not intend that it should be, and do not do away with the weak portion of the ligament. Dr. Murphy, in reply to a question in regard to this, did not deny that you failed to get rid of the weakest portion

of the round ligament, but said that after you brought the uterus in its normal position, the intestines pressing on its posterior surface would hold it there, but we know this is not always the case. The operation devised by Mayo would certainly seem to meet all requirements and would not in any way alter the relation of the uterus with any of the surrounding structures. It would leave the attachment of the round ligament just where nature intended it should be, and the strain on its strongest portion.

During the past month I wrote Dr. Mayo requesting that he write me a brief description of his operation, and I will give the technique just as he gave it to me. First is his modification of the Alexander externally. The several steps in this are the same as are usually done in the Alexander, except he brings both the round ligaments together at the lower angle of the incision and sutures them together and does not detach them from their insertion into the labia majora as is done in the Alexander. This would seem to preserve the nutrition of the round ligaments and would furnish more surface for adhesions to form between it and the structure of the anterior abdominal wall.

The following is the description of the internal Alexander as given by Dr. C. H. Mayo: "With the patient in the Trendelenburg position, the hand is inserted through a three or four inch median or slightly lateral incision in the lower abdomen, and passed into the upper abdomen to explore by touch the region of the gall-bladder. As the hand is withdrawn, the caecum is brought into the wound and the appendix examined. After dealing with such pathological conditions as are found the pelvis is isolated from the general cavity by a gauze pack and examined. This is done at first, as condition may be present here which would render the preceding examination one of considerable danger if done later.

The uterus is now placed in normal position. This step may require the separation of adhesions. At the lower angle of the incision a pair of curved forceps, Cleveland ligature-carrier or other similar instrument, is passed laterally beneath the aponeurosis just over the muscle to the point where the round ligament leaves the abdomen This is facilitated by lifting the wall of the abdomen out and up with

a tractor, also drawing the ligament tight with forceps from within. The handle of the instrument is now elevated, and its point (seen from within) is made to pass over the pulley of the round ligament, not under it, and only beneath the peritoneum, but is made to traverse the true course of the ligament, passing with it beneath the peritoneum, and when one-third or one-half way to the uterus it is pushed through the peritoneum and the ligament grasped at a point from 1 1-2 to 2 1-2 inches from the uterine horn, according to the amount of slack present and the breadth of the pelvis. This loop of ligament is withdrawn with the forceps.

A similar procedure is repeated at the same point on the opposite side. The loops are now ligated together at the lower angle of the abdominal wound. Some operators may prefer to pass the ligature around the ligament first, and grasping the suture on each side in stead of the ligament, using the same to withdraw the loops as in the former porcedure, the two ligatures being tied together in the lower angle of the wound. Others may prefer to grasp the ligaments from beneath the peritoneum and make this part of the operation extra peritoneal. If the folder ligament does not reach to the middle, they are sutured to perforations in the aponeurosis.

Suture material may be chronic catgut or linen. The peritoneum is closed by tier suture of catgut, supported at times by figue 8 silkworm gut in the aponeurosis. At the lower angle the aponeurosis is united to the ligaments by closing sutures. The operation is quickly made. The intra-abdominal pull is the normal one over the true pulley. Its outer course is beneath aponeurosis and over the muscle and becomes fixed only one inch above the spine of the pubic bone, its normal point of exit from the canal."

I had the pleasure of seeing Dr. Mayo operate on quite a number of cases, using the method just described, and it certainly would seem to be the most rational one in use. Dr. Mayo does not attempt to claim that it is original with him, but says it is a combination of several methods that have long been in use, and after a thorough trial of two years he unhesitatingly recommends it as the operation of choice in retro-displacements.

TRASMISSION OF MALARIAL AND YELLOW FEVER BY THE MOSQUITO.*

By Dr. L. Sexton

New Orleans La.

The day of small things and their effects are ever coming to the front. A snow crystal presents as beautiful forms and colors as a glacier; a drop of polluted water highly magnified may prove more interesting to science than the great river which borders your state. So, these small Stegomyia and Anopheles mosquitoes when infected may be more potent for evil than a menagerie of wild beasts turned loose in a community.

The present accepted facts about yellow and malarial fever is that each is produced by a plasmodium or protosoan body, animal in origin, whose life cycle or developing period requires twelve days for yellow fever and nine for the malarial organism. That these germs undergo different forms and changes in the body of the mosquito Stegomyia and Anopholes as an intermediary host between one patient and the next infected subject, or in other words, that the germ requires a human subject and mosquito to develop and run out its life cycle.

Other diseases which are transmitted by insects having an intermediary host or working out their life's cycle in two organisms are manifested in many diseases.

This is not only true of the plasmodium, but the same holds true in the tape worm, which requires the cow or the ox, and man; this variety of tape worm will not live in any other host.

Among the other diseases transmitted by insects is the Bubonic Plague, carried by the flea, from rat to man.

The sleeping sickness of Africa produced by the trypanosom, is caused by the bite of Tsitse fly. Among the lower animals the liver fluke in the cow has a certain variety of snail as an intermediary host between the fluke and the cow.

Still another example is the Texas cattle fever, produced by the bite of the tick.

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*Read before the Tri-State Medical Society.

The insect transmission of disease is not new, but was taught by the Chinese centuries ago. Dr. Nott, of New Orleans and Mobile, as early as 1843, published an article in New Orleans Medical and Surgical Journal, advocating the insect transmission of Yellow Fever. He said:

"It (yellow fever) has an inherent power of propagation, independent of the motions of the atmosphere, and which accords in many respects with the peculiar habits and instincts of insects.

"The general course of the disease traveled day by day for weeks progressing from point to point like the army worm through the cotton region. Yellow fever in 1842 and 1843 traveled from house to house for more than a month, as would a tax collector, and was just as much influenced by the weather, for neither the fever nor the tax collector like to travel in rain, though they pay no regard to the direction of the winds.

"If yellow fever were caused by emanations from decomposing animal or vegetable matter, a single freezing night might suspend the elimination of these effluvia, but the influence must cease when the cause is withdrawn.

"We often have two or three weeks of weather after a killing frost, as warm as that which preceded it, and there is no reason why the decomposition should not resume its operations, but not so with yellow fever. Like insect life, when the ova are once hatched, the propagation goes on till arrested by a killing frost, and it can only be animated by another summer's sun, which calls from their slumbering places the various insect tribes."

With all these corroborating facts, and the further phenomenon that Yellow Fever and mosquitoes always come and go together, are indigenous to the same tropical countries, and that both are put out of business by the first frost, reasoning by deduction the transmission of yellow fever seemed to be through the mosquito. Dr. Carlos Finlay pointed out the Stegomyia as the guilty family of the mosquito tribe, but the final scientific demonstration which proved to the world the truth of the previous belief was made by Drs. Reed, Carroll, Agremonte and Lezear, the latter laying down his life as a sacrifice upon the altar of science.

Five other commissions from other governments and scientific bodies

working independently have all corroborated these findings, and have proven beyond the question of a doubt that the Stegomyia Fasciata Mosquito is the only means by which yellow fever can be transmitted from one patient to another.

Non-immunes in New Orleans failed to contract the disease, though sleeping with yellow fever patients, serving as trained nurses and doctors for months in the same screened hospitals. In Havana they slept under blankets soiled with black vomit, blistered themselves and applied the perspiration and secretion to the raw surface; some of the more enthusiastic swallowed capsules, or pills of black vomit, and also the infected stegomyia mosquito. All these experiments proving negative, they were then bitten by infected stegomyia mosquitoes, twelve days after the mosquito had bitten a subject suffering from yellow fever, when they all developed the fever within three to five days after the bite.

The means of the conveyance of yellow fever by the Stegomyia is closely allied to the malarial infection. The fact that the Stegomyia Fasciata is the sole cause of the introduction of yellow fever rests upon the experience of the government experts in Havana, which Dr. Carroll reports as follows:

"Natural yellow fever is transmitted by the mosquito, and always and only by the mosquito. The harmlessness of fomites has been fully demonstrated by our experiments in 1900 and 1901, in which three young Americans slept for twenty consecutive nights in a room from which mosquitoes were excluded, garnished with articles soiled from discharges from fatal and other cases of yellow fever. Three and four large boxes were packed and unpacked with the articles night and morning by these non-immunes, who suffered no disturbance of health from these exposures. The room was 20 by 14 feet, double-walled, tightly ceiled, heated to above 90 degrees F., and dark. Water was always present to keep the atmosphere moist.

"Two other non-immunes then occupied the room for twenty nights, while additional articles of bedding and clothing were added. They slept in the garments and between the sheets that had covered cases of yellow fever, some of which were fatal. The result of this second exposure was nil. A third attempt was then made with two additional

non-immunes, equally without success. Not the slightest indisposition followed close and intimate contact with this repulsive material in any case. Temperature and pulse rates were recorded at regular and frequent intervals. Four of these seven non-immunes were subsequently infected by blood injections and by means of infected mosquitoes."

Another kind of experiment was included in the Cuban investigations of yellow fever. A room was prepared so as to exclude the possibility of infection by fomites. Every article contained in the room had been previously disinfected and was thoroughly clean. The only possible means of infection with yellow fever was by infected mosquitoes, liberated in the room containing the human subjects of the experiment. Yellow fever promptly followed the introduction of the mosquitoes into the room.

These experiments were corroborated more recently by a French commission of the Pasteur Institute at Rio de Janerio; further corroboration was made by the Marine Hospital commission sent to Vera Cruz, composed partly of New Orleans men who communicated yellow fever through the mosquitoes to five condemned convicts who were given a chance for their lives provided they would agree to be bitten by a stegomyia mosquito which had been previously infected; all of the five were attacked with yellow fever within three to four days after the bite.

The mosquito can only become infected by biting the patient during the first three days of the fever, hence the essential point of keeping the patient screened during the first three days. The germ requires from ten to twelve days to pass from the stomach of the mosquito into its salivary gland, from which point it is propelled through the proboscis of the mosquito into the blood stream of the next subject bitten. Mosquitoes, after becoming infected, are capable of producing yellow fever at intervals of three days for an indefinite length of time.

From these known facts theoretically it would seem very easy to control an outbreak of yellow fever, but when put into practical application, even in small towns with local sanitary boards and experts, aided by the government service, have not been able to eradicate the disease in some places until frost comes to the rescue. This is perhaps due to the fact that very many mild or walking cases of yellow fever are unrecognized but are affording infection to a large number of mos-

quitoes and again, to the further fact that the destruction of the mosquitoes is next to an impossibility in a great many communities.

The malarial germ is of animal origin. They are first seen free in the plasma of the blood, then enter the red blood cell and divide by segmentation. When drawn into the Anopheles mosquito they undergo certain cycles, and develop as a sexual animal. The mosquito stomach digests part of the blood plasmodium, others penetrate the stomach wall and break through into the circulation; these protuberances seen upon the wall of the stomach of the mosquito is where the germ is passing through on its way to the general circulation and thence to the salivary glands of the mosquito. When the mosquito draws the blood this salivary secretion is injected into the human subject: first, to make the skin more easily penetrated by the stylet, and second, to liquify the blood so that it can be more easily taken in.

The experiments which have been made with Anopheles mosquitoes carrying malaria are too well known to you to require repetition at this time; suffice it to say that infected mosquitoes were sent from one section of the country to another section where malaria was unknown, when the person bitten by the Anopheles immediately developed malaria.

Aside from microscopic findings in the blood of the mosquito and of malarial patients, practical experimenation has been repeatedly appealed to for confirmation, and never without positive results. As an example of the kind of evidence obtained in this way may be cited the experiments in the Roman Campagna, where malarial infection is extensive and virulent. Drs. Sambon and Low, of the London School of Tropical Medicine, had constructed in one of the most malarious portions of the swamp land a small house, thoroughly wire-screened against mosquitoes. The house was occupied by a number of people whose movements were not restricted, save that they entered the house every evening at sundown and remained inside until daylight. The supposedly dangerous night air was admitted freely, and, during the rainy season, the experimenters purposely got wet to the skin. None, however, contracted malaria, while their neighbors who were not protected from mosquitoes suffered severely.

Again: To prove that Anopheles are capable of transmitting malaria,

infected mosquitoes were sent to London from Rome, and one of the insects was permitted to bite a son of Dr. Manson. Symptoms of the disease followed the inoculation in due time, a case of malaria occurring in a person who was not living in a malarious country and had not visited a malarious region since childhood. The germs of malaria had been transmitted, in a mosquito, from Rome to London.

I will have to give you enough entomology of the mosquito to show the difference between the three varieties—Culex, Anopheles, and Stegomyia. The Stegomyia and Anopheles are the intermediary hosts of yellow fever and malaria. It is in connection with their trasmission of disease that I have selected these two out of the thirty-one varieties of mosquitoes which we have in Louisiana. The Culex Pungens is the singing and hungry mosquito of the ordinary gutter type that corresponds in the mosquito family to the sparrow in the bird genus. He appears to be always hungry, and is the greater nuisance of the three varieties, though, if he conveys any disease, it has not yet been discovered. The popular fallacy that mosquitoes are only troublesome in tropical countries is disproven by the fact that in Canada and Alaska they are almost as plentiful in some sections as in the swamps of Louisiana. I remember in crossing the Great Divide a few years ago, that at Glacier City, many thousand feet above the sea level, the mosquitoes were very troublesome.

The Anopheles Maculipennis is the brown swamp mosquito, and is differentiated by its long, slim legs and spotted wings. The palpi are as long as the proboscis except in the female of the Culex and Stegomyia; the antinnae in the Anopheles has the appearance of a feather, from its long, hairy cilia. While the Anopheles is swamp-bred, if the conditions in a city correspond to those in the swamp, the Anopheles may be city-bred. The same is true of the Stegomyia: cisterns and water barrels are her preference for depositing her eggs, yet when these receptacles are screened or oiled she deposits her eggs in open gutters or ponds of water. The eggs of the Culex are conical, cemented together at the bottom, and float in great numbers upon the surface of the water. A single mosquito may deposit from fifty to one hundred eggs, which may hatch in from one to three days. The larvae feed upon the animal and vegetable material found in the water in which

it hatches. The entire life cycle or hatching process of the gutter mosquito is from ten to fifteen days; the adult mosquito may live for many months. The Anopheles eggs are boat-shaped; the bottom of the egg is speckled, the top of the egg is dark in color and provided with a transparent membrane filled with air which keeps it afloat. The eggs hatch in from three to four days; the larvae of the Anopheles lays parallel to the surface of the water.

The Stegomyia Fasciata, originally known as Culex Fasciata, is the variety that has given us so much trouble in Louisiana and Mississippi this summer. The Stegomyia mosquito is a study in black and white, its legs being divided into alternate bands of black and white, its body is also spotted, and for this reason it has been called the tiger mosquito. It is more or less fastidious in its breeding places, ignoring the dirty gutters, provided there are cisterns or barrels containing clean water, in which it prefers to deposit its eggs. It has been classed as a day and house mosquito, but it bites in the early night as well as in the day time. The antinnae of the male are more decorated than the female; to a certain extent they resemble feathers; these antinnae are auditory in their functions. A mosquito breathes on either side of its chest, and it is this respiration, and not the buzzing of its wings, that produces the singing of the insect. Another peculiarity of the Stegomyia is that its body is bent at an obtuse angle in a resting position, whereas the body of the Anopheles rests in a straight line to the surface upon which it lights.

The male mosquitoes of all three varieties are vegetarians, and live upon fruit and the juices and gums of plants and trees. This is on account of the structure of the proboscis, which is so arranged that he cannot pierce the skin with the stylet.

In observing the mosquito feeding upon bananas or any vegetable substance, three-fourths of them are male. The male is much more ornamental than the female; his headdress resembles the plumes on a lady's hat. He is usually smaller than the female. It is the male mosquito that forms in groups above your head, and only the female that is the blood sucker.

The Stegomyia eggs are boat-shaped and float singly upon the water. The female may deposit from ten to sixty eggs. In very warm weather

they hatch in ten hours; during cooler weather they may require as many as three days. The Stegomyia eggs have air chambers on the side which keep them afloat.

You will observe that the breathing tube of the larvae is near the end of the tail: it is necessary for the pupa to project; this tube is located above the water to regain the required oxygen upon which it lives. If the surface of the water is covered with a film of oil, this breathing tube becomes clogged by a drop of oil. This is the reason for oiling all water surfaces in which mosquitoes breed. Approximately the Stegomyia mosquito breeds in one week, the Culex Pungens in two weeks, and the Anopheles in three weeks. The Anopheles may be eradicated by draining the swamps, the gutter mosquito by flushing the gutters or putting them under ground, and the Stegomyia mosquito by oiling and screening the cisterns.

If our freight cars are fumigated and the passenger coaches screened, with five days in detention camps for subjects from infected localities, the handling of all passengers and freight could be safely carried on without risk of infection to other points during yellow fever outbreaks.

THE PROPER STRENGTH OF ADRENALIN SOLUTIONS IN THE TREATMENT OF HAYFEVER.

In the treatment of hayfever with Adrenalin Chloride it has been suggested that weak solutions, frequently applied, are apt to yield better results than the occasional application of a strong solution. One of the pathological features of this peculiar malady is a turgescence of the turbinal tissues due to excessive dilatation of the capillaries. That this is the result of a neurosis involving a more or less pronounced local vasomotor paralysis is pretty generally conceded. Overstimulation, by reaction is very sure to result in a complete paralysis of the vasomotor supply in the region affected. On the other hand, gentle stimulation with weak solutions is not so likely to be followed by a reaction.

These views are in harmony with the published observations of Dr. Crile, of Cleveland, Ohio, who found that in a decapitated animal the heart's action was better sustained by the continuous administration of a weak solution of Adrenalin Chloride. Furthermore, this is probably nature's method of supplying this vital principle to the healthy human body through the agency of the suprarenal gland, its constant presence in the blood in minute amount being sufficient to maintain vasomotor equilibrium.

Selected Articles.

FOREIGN BODIES IN THE CORNEA AND CONJUNCTIVA.*

By Albert Rufus Baker, M.D.

CLEVELAND O.

Among the more frequent minor accidents that befall mankind which the medical men is called upon to give relief is the removal of foreign bodies from the eye. Notwithstanding the protection of the brow, eyelashes, lids, the sensitive nerve endings of the cornea and the lachrymal apparatus, particles of dust, cinders, chips of metal, small insects, indeed almost any conceivable small object may find lodgement in the conjunctival sack or upon the cornea. The amount of iritation caused by the presence of a foreign body in the eye does not depend upon its size so much as upon its irregular shape and its position. A small cinder lodged upon the under side of the upper lid and rubbed on the cornea with every movement of the eyeball will cause the most excruciating pain and make life almost unendurable until removed. The same cinder might be imbedded in the cornea for a number of days causing relatively little discomfort.

A foreign body with a smooth surface like a flax seed may float about in the conjunctival sack for a long time without causing great discomfort. But sooner or later foreign bodies that do not call immediate attention to their presence by pain and profuse lachrymation by their rough outlines or position will make their presence known by a more or less severe catarrhal inflammation of the conjunctiva or by a small burst of blood vessels extending towards it; if imbedded in the cornea. Grains of powder and, small metallic objects such as bits of steel or iron may become imbedded in the conjunctiva or even in the cornea without causing any deleterious effect other than a cosmetic one and possibly impairment of vision if in the cornea. The patient may or may not be aware of its presence. Probably in the majority of cases

*Read before Northeastern Ohio Medical Society, Canton, Ohio. Reprinted from Cleveland Medical Journal.

he is conscious of its presence and yet on the other hand the patient will frequently come to the surgeon, positive there is something in the eye when the most diligent search will fail to discover anything It is possible that in most cases there has been something in the eye, but it has either been washed out by the tears or removed unconsciously either by the patient or his friends, and the sensation of there being something in the eye is due to the previous irritation similar to that of a sensation of a fishbone still in the throat after it has been removed. A drop of a 2 per cent. solution of cocaine to relieve the immediate symptoms and assurance that a night's sleep will relieve all unpleasant symptoms will be all that is necessary in these cases to effect a cure.

So many obscure symptoms are due to the presence of foreign bodies in the eye, and they are so easily overlooked that it is necessary in every case to carefully inspect every portion of the cornea and conjunctiva. Only yesterday a pastor of one of our city churches came to me with this history: Three weeks ago his right eye suddenly began to trouble him; he consulted his family physician who gave him a boric acid wash which he used diligently for several days without relief. He again consulted the family doctor who changed the wash to sulphate of zinc, and advised him if he did not soon get relief to consult an optician for spectacles. The eye not improving he bought a pair of spectacles from the nearest optician. The spectacles not affording relief, he followed the advice of a neighbor and applied a poultice. Fortunately he did not follow this treatment long; he came to me suffering from a poultice conjunctivitis, but while telling me his story I could see a foreign body in the cornea, the cause of all his trouble, which proved to be a very small metallic body such as I think frequently comes from the trolley or wheels of electric cars.

The examination should be made carefully and systematically. First the cornea with direct daylight, and if the source of trouble is not found, oblique artificial light and the ophthalmoscope. Careful inspections of the conjunctiva should be made, the outer and inner canthus beneath the lower lid, then invert the upper lid placing a probe or pencil along the upper border of the tarsal cartilage and taking the lashes in the fingers and forcing the lid over the probe toward the brow. This

can be done most easily by standing behind the patient with his head resting against your breast, but most oculists prefer to invert the lid from in front for obvious reasons; and become so expert that they scarcely ever need to use the probe and even use only one hand.

The most frequent site where the foreign body will be found is on the surface of upper lid about the middle of the tarsal cartilage and can be readily wiped off with cotton on a probe. If not found in this location the eye should be turned downward, and a careful search made in the retro-tarsal fold where very large foreign bodies may be concealed; such as blades of grass or beards of grain, caterpillars, flies and insects, splinters of wood, etc.

For a number of years I have been called upon to care for the injured eyes in the Buckeye Electric Works, where a large number of girls are employed in making incandescent light bulbs. The thin glass of which they are made is frequently broken, particles fly into the eyes, and small particles are lodged in the conjunctiva or in the cornea. Often the hemorrhage is quite profuse and the patient is alarmed out of all proportion to the seriousness of the injury. There is always considerable anxiety as to whether the glass has all been removed. Sometimes quite large pieces were wiped out from the rectro-tarsal fold and numerous small particles have been found imbedded in the cornea, but seldom a penetrating wound of the eye. In case of doubt as to the presence of glass in the eye either within or outside of the ball the X-ray will surely reveal its presence, a most useful aid to diagnosis in all such cases which should be used in every case of doubt.

Eye lashes and bits of hair will not infrequently be found in the conjunctival sack and in several cases I have found cilia in the canaliculus the points of which were protruding far enough to cause the most annoying irritation of the eye. Many patients come to the consulting room with an irritated eye and often think they have something in it which will be found to be due to small vesicle not so large as a head of a pin on the tarsal edge, pricking it with a needle will give immediate relief.

In a large manufacturing city like Cleveland, the physician is called upon daily to remove cinders, pieces of emory, steel or other metallic substances from the cornea. In all large manufacturing plants there

is one or more of the employees who become quite expert in removing foreign bodies from the cornea. During the past few years the more difficult cases are referred to the contract surgeon and usually by the time it reaches the oculist it has become infected and what would have been a simple case if seen early may prove most serious. It is extremely important that surgeons employed in this capacity should not only be skillful in removing foreign bodies but should take every precaution to avoid infection.

The removal of foreign bodies from the cornea requires a good light, perfect eyesight, steady hand and good judgment. If possible a north light should be procured from the window as little obstructed as may be with shades, curtains and other objects causing annoying reflections The patient should face the window and the surgeon placing a towel over the patient's head and then standing behind him is ready to remove the foreign body.

Two or three drops of a 2 per cent. solution of cocaine should be instilled in the eye at intervals of one or two minutes. The cocaine should be freshly prepared; no solution should be used more than 24 hours old. The most convenient method of preparing solutions is by the use of tablet the same as are used for hyperdermic medication. A tablet 2 3-5 grains to a dram of boiled water will make approximately a 2 per cent. solution. If the eyes are very irritable or sensitive to light a drop of the cocaine solution in the uninjured eye will greatly facilitate the ease of the removal of the foreign body from its fellow. The lids should be washed as well as the surgeon's hands and all instruments carefully sterilized. Almost any fine pointed instrument will serve well in the hands of a skilled operator. But for a general use what is usually described as a spud will be found most useful.

A loupe—a large lens of about two and a half or three inch focus is of great help in focusing the light upon the cornea and with artificial light is essential. It is convenient to have an assistant to focus the light, although most oculists dispense with the assistant and hold the lids open and steady the eye with gentle pressure with the second and third finger and hold the lens and focus the light with the thumb and first finger of the left hand and remove the foreign body with the right. The surgeon placing a towel over the patient's head which is

placed against the surgeon's breast, the foreign body is removed with the instrument held in the hand as a pen and lifted out by working with a slight scraping movement beneath the edge of it. Since the discovery of local anaesthesia this is very easily accomplished, but formerly was often quite a difficult task and many times the surgeon was obliged to resort to general anaesthesia. Sometimes in case of metallic substances deeply imbedded material aid will be given by the electro magnet. Several times when splinters of iron or steel have been found deep in the cornea or even partially in the anterior chamber I have followed the suggestion of Lawson and passed the needle through the cornea behind the foreign body and thus supported it so it could be removed without forcing it into the anterior chamber. It is seldom necessary to use a speculum in removing foreign bodies from the cornea, but in these cases it is best to place the patient on a table and use the speculum and steady the eye with the needle through the anterior chamber.

In removing grains of powder or other small particles imbedded in the conjunctiva it is best to place the patient in the recumbent position and introduce a speculum and then take hold of the foreign body with a fine mouse-tooth forceps and lift it up and snip off the conjunctiva with a fine pair of scissors. In case of powder grains it may be necessary to cut off numerous small pieces of conjunctiva, yet I have never seen any deformity resulting therefrom. If the hemorrhage should be annoying a drop of adrenalin 1-10000 will control it and permit you to proceed. If the foreign body has passed through the conjunctiva and lodged in the sclerotic it can be scraped out with the spud, the same as from the cornea.

Usually when a person is conscious of something having entered the eye they immediately rub it with the back of the hand or handkerchief and thus if it happens to have any sharp or ragged edges forces it into the substance of the cornea or lid as the case may be and fix it there immovably. While if let alone the profuse lachrymation would probably soon have washed it out. It is always better to take the lashes between the fingers when something has entered the eye and lift the lid away from the ball and let it fall out or let the tears wash it out, rather than rub it in.

This of course requires considerable fortitude which many of us do not possess. Generally speaking no treatment is necessary after the removal of sterile substances from the conjunctiva or cornea, providing it is removed promptly and the eye not infected in its removal Unfortunately all foreign bodies entering the eye are not sterile and the efforts at removal are frequently that most calculated to infect the

eye. Between poultices and eye stones, flaxseeds and licking it out with the tongue and even more disgusting and uncleanly procedures, such as washing the eyes with urine it is remarkable that more infected eyes do not come to us.

The most frequent form of infection is that of an acute catarrhal conjunctivis, generally due to the bread and milk flaxseed or other poultices applied for the relief of pain. There are always present numerous pathogenic bacteria in the conjunctiva and all that is necessary to kindle an acute conjunctivitis is to lessen the normal resistance of the healthy conjunctiva by the application of heat and moisture and it matters little whether this be a good soft home-made poultice or a more uncomfortable moist, antiseptic dressing applied by the surgeon —the results are the same.

Recent acute cases of not too virulent a character will be quickly cured by removing all dressings from the eye and washing the conjunctiva frequently with sterile water or preferably saturated solution of boric acid in water. If of longer standing or if the secretion is of a markedly purulent character a 2 per cent. solution of protargol had best be first instilled into the eye followed by repeatedly flooding out with boric acid solution. If ulceration of the cornea be present the prognosis should be more guarded. If the ulcer presents a "dirty" appearance all the shreds of broken down epithelium should be scraped off with a needle or spud the same as in removing a foreign body, then wrapping a fine probe or tooth pick with a little cotton dipped into a 1-500 solution of bi-chloride of mercury and touch the ulcer giving the cotton a slightly rolling motion so as to touch every particle effectually and yet using great care to prevent an excess of the bi chloride so as to run over the healthy cornea. This I have found fully as effectual as the actual cautery not leaving such large scar tissue and devoid of danger. It is good practice to use this as a precaution after removing foreign bodies suspected of being infected or where numerous attempts have been made at removal. Under cocaine it is not pain ful. If there is no conjunctical complications the compress bandage with dry dressings may be used. But if there is any suspicion of conjunctivitis, past or present it is better to leave the eye open. If the eye is painful even though there be no evidence of iritis, atropia 4 gr. to oz. dropped in the eye two or three times daily proves beneficial.

The use of hot water will prove our most valuable ally used by hot compresses much as the barber applies a hot towel to the face after shaving, or putting the eye into a cup of hot water as recommended by Dr. Connors. The hot water should be used from twenty minutes to an hour, repeated two or three times daily and more frequently if pain be present.

VIRILE SCIENCE.

Whatever may be the fashion in influential circles ,whatever the form of foreign-born snobbery, an emasculated science will never appeal to the great body of the American people, as represented by the medical profession. And the time will never come when there is such a perfection of our science as will do away with every opportunity for those brilliant intuitions that leap at a bound over the chasms of ignorance, and by the daring of chance pluck the flower of safety that must have been lost before slow certainty that blasted a road to it. Granting that such intuitions come most frequently to the most thoroughly proficient, there remains somewhat of possibility that relates solely to the type of man concerned—things possible to one would be beyond the powers of another.—American Journal of Clinical Medicine.

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The Journal will be mailed on or about the 15th of the Month. Subscribers failing to receive it promptly will please notify us at once.

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The editor is not responsible for views expressed by contributors.

All communications should be addressed to THE ALABAMA MEDICAL JOURNAL, Birmingham, Ala.

To our patrons in the advertising line we wish to say that occasionally proper changes have been overlooked and once an unnecessary article published—copied hurriedly by an unexperienced business manager. We wish to state that such will hereafter be avoided.

The Country Doctor.

We are rapidly becoming a people of cities, and we swarm together in these infested places, while the God-given country, with its woods and fields and freedom lies far beyond, and we know it not.

But in other days we were a free people, living each upon his own

broad acres, breathing air unpoluted by the dust and smoke of cities, unpoisoned by the struggling thousands—and we knew and loved the life.

And our first and last friend was the country doctor. With what intimate memories is the name enshrouded! With what a wealth of pictures of the past do we associate him! Peculiarly a product of the time which knew him, he lived and worked amongst us—and knew no rest till the last sleep came upon him.

So many and beautiful eulogies have been devoted to our friend, that we hesitate to attempt anything of the kind; and prefer to speak of him from the standpoint of the doctor and scientist. And these same eulogies have worked our old friend, the country doctor, an injustice; for they have dwelt upon his character and attainments as a man to the exclusion of his ability as a doctor, and the inference has been that his methods were loose and unscientific.

There was never a more false deduction. As a practitioner of medicine we have never seen his equal; as a therapeutist we are miles behind him. From his broad judgment and fearless selfreliance the best of us might take a lesson.

His pharmacopea was not large, but how thoroughly and personally did he know it. Unassisted or hampered by the present flood of proprietary preparations, he did his own compounding and found his own dosages. As a practitioner he treated individuals and not merely cases or diseases, and herein lay the reason for his success. We doctors of a latter school have become infatuated with the idea of specific medication, and little is said or thought of symptomatic treatment.

The old time country doctor believed in combating symptoms and believed that the body, if not overcome, would furnish the specific medication for itself; and so his aim was to support the body and fight against those symptoms that weakened the individual. He was governed by no iron bound rules, but varied his treatment with the varying important indications that his different patients exhibited. His aim always was to assist his patient to get well—then name the disease anything you please; hunt for all the little germs you please—but first

and foremost get your patient well. He believed in his ability to recognize adverse symptoms, and he was not afraid of killing his patient in his attempt to relieve these symptoms. No luke warm methods did for him—if he had imagined that a patient could take care of himself in any particular illness, if let alone; we are very sure he would have let him alone, and gone on to the next that he knew needed assistance. Had he believed that in treating diseases you might give this medicine or you might just as well not, or give this other thing or leave it off—"just as you please, it really made no difference"—we are sure that he would have quit practice and gone to farming. He believed hot or cold; and hot or cold he practiced; and hot or cold his patients believed with him. For he wielded an influence over his patients to which the suggestive methods of the modern nervous specialist is pure child's play.

Unfortunately for us, his methods and treatment have largely passed away with him— for he had little time for writing—and had so small a portion of the egoist in his compounding that fame and the modern methods of advertising touched him not.

Fearless in life and in practice—independent and self-reliant—born with that highest of mental attributes, common sense and essentially an observer; he knew that he knew and was ruled by no man's dictum.

We have largely fled to the cities and in this exodus the old time country doctor has disappeared from the land that knew him. But his memory is still a cherished and fond recollection in the hearts of those that loved him.

Communication from Dr. H. A. Moody.

To the Editor of the Alabama Medical Journal, Birmingham, Ala.

The May number of the Mobile Medical and Surgical Journal contains an editorial of such a remarkable character, attacking the good sense and judgment of the membership of the Medical Association of the State of Alabama, the sincerity of the Board of Censors, and the

accepted construction of the constitution adopted at the April session in Birmingham, that one is at first bewildered at such a display of calm, cool egotism, and then indignant at the insulting tone of the entire performance. Finally succeeds a feeling of regret that the genial editor of the Mobile Journal should, for once, have turned aside from the straight course indicated by years of successful work, and demonstrated by such a remarkable consensus of judgment in the membership that it would seem to be entitled to at least his respect. We all know how prone he is to generous enthusiasms, but it is indeed strange that the few members who strive to promulgate the anarchistic doctrines he now advocates should, by making more clamor than others, impress him to the extent of disarming his judgment, and flatter him to a degree that would have awakened the envy of Petronius. And the result is truly wonderful! With brilliant sallies and gorgeous verbiage he persists in his march of accusation and insinuation till one is reminded of the midnight tramp, the sputtering candles, the toot of horns and the crash of crockery round the hosts of Midian 6000 years ago. Fortunately in these days neither cities nor constitutions are overthrown by noise and bluster alone, and though his first blast is blown, his candles exhibited and his pots smashed, the large majority that adopted the new constitution stand securely within its symmetrical structure, undismayed.

After reading the sounding sentences, and taking a fresh breath, one naturally asks: "What is the matter?" What is it all about? Why this circulatory gyration of words and sentences?

A careful reading of the editorial in question reveals two salient points round which this flow of verbiage revolves, and it is a surprise, in one point, to see upon how small a pivot a pyramid may be balanced.

But first, with that unshakable conviction pertaining to one to whom knowledge comes by nature, instead of by study and observation he proclaims that "the rejoinder of the Board could hardly find justification" —no matter, it is implied, what was said in the President's message.

When we read a little farther along, that he had not seen the President's message, bias and prejudice, to say nothing of assurance, stand revealed.

The writer of this article cannot resist the temptation to imagine

our editor in a situation similar to that in which the Board of Censors and the State Health Officer found themselves while our brilliant President read that incisive, hostile, revolutionary message to the Association in full dignity assembled. Our friend would have come prepared to receive thanks and congratulations for the most strikingly successful year in the history of the Association. He had guarded the social, professional and mercantile interests of the state from threatening danger on every side. Commercial bodies had thanked him; railroad managers had covered him and his system with congratulations. Distant states had come, in the person of their most eminent physicians to sit at the feet of his Association and learn how to do likewise. But listen! The invocation for divine blessing has been asked, the addresses of welcome have been pronounced, and the President rises. First, in his address, come the congratulatory phrases suitable to the occasion; then a series of recommendations, the substance of each of which has been under careful consideration for years, and for whose realization the time seemed about ripe. Then a dissertation upon the faults and errors of the Association. Visiting gentlemen from other states looked surprised, then confused. A small contingent, principally composed of men too impatient to wait for association honors that would surely come to them in time, or from others who know nothing of the profound and rational basis upon which the structure is erected, applaud, talk platitudes, and create the impression of serious division. But listen. What words are these in the President's message? "Ring rule?" "Bossism?" Can this be meant for him?

Those who know the editor of the Mobile Journal know that he would not let the attack pass without retort; and it is very doubtful whether that rejoinder would be couched in language as restrained and dignified as was that of the Board of Censors. Before condemning the rejoinder it would have been more modest, more just, to know the provocation.

The whole controversy is unfortunate, and should not appear upon the record. But the President refused to retract a word, so the rejoinder has to stand. Such was the opinion of the Association, evidenced by the large majority sustaining that section of the report, and there the incident must probably rest.

The second mistake made by the Association, in the opinion of the eloquent editor, was the retention of the words "due regard," in the latter clause of Article 40, Section IX of the new constitution. Around this clause a verbal battle raged for an hour or more. It developed, most curiously, that, as a rule, members who are always seeking and voting for various changes in our laws, were the most earnestly opposed to ratifying this clause. But the battle ended, and seemed to clear the air till this Mobile editorial started the controversy afresh. Convince some men against their will and they are of the same opinion still. That is all right! A man may believe what he will. But our editor has introduced a new feature. He denounces as "nonsense" the conclusions of men who everywhere do more gratuitous, hard work for the Association than he has done for it in his whole life.

He styles their careful, clear argument verbal jugglery. Twice he rolls the sweet expression under his pen, and lo! The English speaking world stands convicted of ignorance of the meaning of its words.

But at the meeting, on the floor of the Association, the matter was so thoroughly discussed pro and con that misunderstanding could hardly exist. As for "verbal jugglery," if any there were, the opportunity to unmask it was there, in public debate, and not from the one sided issue of a printing press. But no one heard of jugglery there!

As has been said, the weight and meaning of those words were discussed exhaustively on the floor of the Association, and the words were accepted and allowed to stand by a vote so nearly unanimous that it amounted to the same thing. It was evident that the members discarded the idea of any dictation to the President, by any one, and aimed only to secure his consultation with men selected on account of their experience and judgment, before he would act in any important matters, some of which indeed might injure the standing of the Association and cause immense damages to the State or its communities; as for instance the declaration of unjustifiable quarantines; or cause needless trouble and expense by calling unnecessary special meetings of the Association; or introducing undesirable features into the sessions. Surely this is wise; and after obtaining the opinions and advice specified the President will weigh them in the scales of his own judgment, and act according to his own conclusions.

Like all the other officials he is responsible for his actions only to the Association in session, not to the Board of Censors or any other body or person. In this opinion the editor of the Mobile Medical Journal and Surgical Journal does not concur. So accurate is usually his judgment in literary matters that it is almost presumption to disagree with him therein. Yet the writer has found several gentlemen whose positions or professions entitle their views to almost as much respect as his, who take an opposite view. Indeed, inqury has failed your correspondent in his search among English scholars for one opinion concurring with that of our editor, with the single exception of one gentle man who espoused that side of the question upon the floor of the Association, and who, once having declared the horse fifteen feet instead of fifteen hands high, maintains his Brobdignagian assertion, for the sake of the bright jewel of consistency. Let the following statements, pronounced by indisputable authorities, bear witness to the soundness of your writers interpretation of the phrase, "due regard for the opinion and advice." One gentlemen, a classical and English scholar of wide reading and precision of analysis, at present occupying and adorning a seat in the supreme court of the State, expresses himself in effect, as follows:

"The article is mandatory as far as conferring with the State Board of Censors and the State Health Officer before taking any important steps in the matters indicated is concerned, and he must give their opinions and advice "due regard" or consideration. How much regard is "due" them it is for him alone to decide, and for his final actions he is responsible only to the Association in session."

Here also are the opinions of Prof. M. C. Wilson, President of the State Normal College at Florence, Ala., a gentleman of whom it may be said in all educational circles in the South "not to know him proclaims ones self unknown." "I should say that after directing the official to consult the specified officials the phrase "with due regard," would have to be construed as meaning this: Take the advice of these officials, give it 'due regard,' and then make up your mind what course to pursue. Or, in other words, in weighing both sides of the case, let the judgment of those officials go into the balance. But always, it seems to me, is implied—you must, yourself, make the decision." As

will be seen President Wilson did not know to what organization or officials the question applied, but answered it as an abstract, impersonal problem.

The following will also be of interest to all who have followed this question. It is from President Abercrombie, of the State University: "In my opinion the presiding officer of the Association is not bound to absolute compliance with the 'opinions and advice' referred to. It is clearly his duty to consider carefully such 'opinions and advice,' and, after so doing, to act according to his own best judgment. I have consulted two or three of the professors at the University, and they agree with me in this opinion." He further says: "This question arose in the administration of the State Text-book law. The law created two commissions. The sub-commission was charged with the examination of books and with making recommendations to the head commission. The law directed the head commission to make the selection of books, giving due consideration to the recommendations of the sub-commission. It was decided in that case that the head commission was under no obligation to follow abolutely the recommendations of the sub-commission."

Mr. Editor, it would be an imposition to burden your pages with more statements of this nature. Coming from the source they do they should settle finally the question at issue; but so strangely is human nature compounded that such a conclusion is too favorable to be hoped for, and we may still expect to hear the clatter of hoofs from hobby horses fifteen feet high upon the floor of the Association.

Finally, the editorial in question sneers at the idea of the State Board of Censors, or the State Health Officer, possessing any more judgment of what is for or against the welfare of the organization than any other member, however inexperienced. Such member may live in the most northern counties, may be entirely unfamiliar with the matters of quarantine and public health, yet, when emergencies arise, if he happen to be President of the Association, he must act on his own initiative, guided only by apprehension and inexperience, and never consult the men who, on account of judgment, experience or talent have been elected to serve as an executive committee between sessions, lest

he be bowing to an unjustifiable assumption of power and lowering the dignity of his office.

For many years this Board and the State Health Officer have been offering such advices. Sometimes they have been accepted, sometimes rejected. No man can cite an instance of oppression on their part. No bill or resolution has ever "died in committee" when once referred to them. Every act submitted has been "duly regarded," studied and reported upon. The report of the Board of Censors has been considered by the Association with "due regard" to its importance, altered and amended till it suited the Association, and acted on section by section.

In all the years of the Association the incoming presidents have, with perhaps two exceptions, made from two to ten recommendations, sometimes of an almost revolutionary character, in their messages. These have been referred to the Board of Censors, who, with "due regard" for their importance, have considered them carefully and reported them back to the Association for final action. True, these hours and days of consideration rob the Censors of nearly all the pleasures and benefits of the meetings, but without such careful study in committee the final actions must have often been unwise and injurious. At any rate the whole character of our organization would have been changed, and we should have degenerated to a mutual admiration—debating—society. Instead of visiting us to learn our methods and imitate them doctors from other states would come as missionaries to save us from chaos; our public health system, now the admiration of all health organizations, would have collapsed, quackery would reign triumphant and the organization of doctors for the protection of themselves and the general public would have disappeared from Alabama.

The Board and the health officer claim no "superhuman wisdom." But they do claim to devote more of their time, thoughts and efforts to the welfare of the organization than any other members whatsoever, and that their opinions are worth more than those of other members only as they have read, thought and worked harder to reach them. Common sense asserts that they ought to know more about what is and what is not desirable, than a member or officer who has never made a

serious study of the charter, constitution and by-laws. But they claim none of the Delphic wisdom so carefully denied them by our volatile editor. None of them sit on tripods, small or large. There are no oracles among them, that any one recognizes. Indeed there is but one oracle in Alabama; and unfortunately he is not a member of the Board of Censors.

Respectfully,

H. A. Moody, M. D.

Message of the President of the Medical Association of Alabama.*

By Eugene D. Bondurant, M. D.

MOBILE, ALA.

Viewing in retrospect the work of the Medical Association of the State of Alabama during the past twelve months, we find that no ground for discouragement, no evidence of arrest of that steady progress which should ever characterize the successful medical society, and which has in the past been so conspicuous a feature of the growth and development of this association.

The most noteworthy event of the year was the severe test of our health system during last summer and the gratifying demonstration of its competence to skillfully, quickly and adequately meet any emergency with which it might be confronted. Although threatened on two sides by yellow fever, our State was spared the loss of life, of property, and that paralysis of industry which overtook some of our less favored neighbors. This fortunate outcome of threatened disaster may justly be regarded not only as demonstrating the practical efficiency of our health and quarantine systems, both State and County, but likewise is a personal triumph of our State Health Officer. The victory is but the greater in that this is not the first, but the third time in succession when our neighboring commonwealths have been devastated by this saffron hued curse of the tropics, while we of Alabama have gone unscathed.

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*Submitted at the annual meeting in Birmingham April 17, 1906.

To Dr. Sanders, to his assistants, and to those city and county health officials whose geographical position upon the firing line ordained that they should bear the brunt of the strife, the people of our State owe a debt which money cannot pay. These gentlemen, sacrificing their time and personal convenience to the need of the hour, gave their skilled service in unstinted measure to the cause of preventive medicine, sanitary science and humanity, acquitting themselves of their high trust in a manner which entitles them to the appreciative recognition and admiration of their fellow members of the medical profession of Alabama. If the inner consciousness of duty faithfully performed, of good work well done, be in any degree a recompense for labor, then should these gentlemen feel themselves requited, but to this our association should be glad to add its own public and official expression of approval and cordial commendation.

Gratitude is notoriously short lived, but neither the members of this society, nor the people of Alabama should soon forget the sanitary triumphs of our public health service during the summer and autumn of 1905.

The year has also marked the beginning of organized warfare against tubercular disease. The inauguration of this fight is due to my distinguished predecessor in office, who so earnestly and convincingly introduced the matter to your attention in his annual address. Shortly after our last meeting a conference on tuberculosis was, under the auspices of this association, held in the city of Montgomery, at which conference the initial steps in the organization of an anti-tuberculosis league were taken. Local meetings of somewhat similar character have since been held in several of the counties of the State, and despite the seeming paucity of practical achivement there is unmistakable evidence of the existence of an undercurrent of deep and abiding interest in this subject, which if fostered and encouraged will surely grow and increase, and bring us nearer to our ideal of one day freeing humanity from preventible disease. The members of this body should individually and collectively aid in this fight, strive toward this goal. And in continuation of the work already begun, I now recommend the creation of a standing "Tuberculosis Committee' to consist of nine members of this body, to be appointed by the incoming President; to hold office for such

term as the association may direct; to be charged with the responsibility of organizing and actively prosecuting an anti-tuberculosis campaign; to be empowered to act at their discretion either independently of or in association with any individuals, organized bodies, and existing, or to be created anti-tuberculosis leagues, and required to make reports of work done and results accomplished at the next annual meeting of this association.

The appointment of such committee should not be regarded as in any way encroaching upon the prerogatives of the State Board of Health, nor as relieving the State Board of any of its duties and responsibilities in the premises.

The committee should supplement the work of the State health authorities by doing that which, without the aid of such committee, would probably go undone.

Your attention is also directed to the pressing need for some State provision for the care and treatment of a class of defectives who cannot be properly committed to the Insane Hospital, but who merit in their weakness, and should receive ,such aid as the commonwealth may be able to give. I recommend that this Association place itself on record as favoring the establishment of a State institution for the care of inebriates and drug habitues.

Referring now to a matter which chiefly concerns us as members of State Medical Society, I wish to say that in my opinion the time has come when we should establish and maintain a medical journal, to be edited and conducted upon the highest plane of ethical and scientific excellence, and in which should be published all papers and reports, and all proceedings of the Association, as well as other medical news and matters of general interest to the profession. I recommend that suitable steps be taken looking to the early establishment of the "Journal of the Medical Association of the State of Alabama."

And now, gentlemen, in further discharge of the constitutionally imposed duty of discussing with you on this occasion, the "interests, objects and business of the Association" I shall ask your brief but earnest attention to certain matters touching the present condition and future policy of this Society, which merit your careful consideraion and call for action.

One of the greatest evils of our present system is its provision for some seventy boards of medical examiners, and the consequent existence in our State of about seventy different standards of qualification for legally entering upon the practice of medicine. Our Alabama standard can claim to be no higher than that of the poorest and least efficient of our county boards. The evils of this plan were recognized in the beginning, but were incorporated in our first constitution and have been tolerated since for the reason that this feature was supposed to promote the organization, growth and prosperity of the county societies. It was never intended that this should remain a permanent feature of our organization. We have now endured the multiple and variable standard evil for a sufficient length of time, and all has been accomplished which can be accomplished by this means. The long existent and increasing disadvantages now more than overbalance any present or prospective benefit. I, therefore, recommend the abolition of the county boards of medical examiners—this recommendation not contemplating any limitation of the powers of the County Boards of Censors and Boards of Health, but merely the delegation of their duties as medical examiners to a State Board.

Now this is a recommendation easily made, and a matter which some of you may regard as simple, and to be readily disposed of by majority vote. But when we come to examine the situation closely, we find the task of doing away with the county examining boards one of considerable difficulty. In fact were each and every one of you here present in favor of taking this step and ready to vote "aye" when the question is put, you would be unable to, at this time legally accomplish the desired end. For we must not only amend our constitution, but must change our charter, and then obtain from the Legislature the needed modification of our State medical laws. I recognize and give full weight to the obstacles presented, but in consideration of the unquestioned need for the correction of a real evil, for the strengthening of a weak point in our organization; and in view of the in any event necessary delay in final accomplishment, I think it none too soon to take the first step. We can go on record as favoring the substitution of a single State Board for the existing County Boards, and by resolution instruct the State Board of Censors to take the required steps for obtaining needed

legislation and change in our charter. I regard the fear of the Legislature which is always urged as a reason for inaction, as a confession of weakness. If we are afraid to have our system publicly discussed, act only in the defensive, never fight until forced to the wall, we deserve to be beaten and will eventually be well beaten. If our cause is just and right, and the proposed changes proper and of advantage to the people of the State, we should not fear to advocate them and should be willing to fight for them if necessary.

I wish also to bring to your attention the great injustice of our present plan of representation in the house of delegates, which accords to each county society two delegates, whether the society number 10 or 200 members. This is an extreme case of recognition and acknowledgement of the "sovereignty of the counties" given in the first instance for the same reason which led to the creation of county examining boards—to favor and build up societies in the smaller and more sparsely settled counties. This apportionment of delegates was and is most unjust, and its continuance not only unjust but inexpedient. The larger county societies are entitled to larger representation in the house of delegates for exactly the same reason that they are entitled to and given larger representation in the College of Counsellors. Following in the footsteps of our President of two years ago, I recommend that each county society be empowered to send to the State Association one delegate for every ten members, or major fraction thereof, the representation of no county to be less than two delegates.

But the most important of all questions which will be submitted to you for decision during the session which is today inaugurated is that of the substitution of the new constitution, prepared by the State Board of Censors and submitted at the Montgomery session one year ago, for the somewhat time worn instrument under which we have lived and—let us say—prospered, for some thirty years or more. It is to be hoped that every counsellor and every delegate here present has read this new constitution, carefully compared its provisions with those of the old constitution, and thus become entitled to an opinion as to the respective merits of the two. I feel sure that every one who has done this will, without exception, grant that in clearness, precision and logical arrangement the proposed new constitution is superior to the old.

But I am equally sure that those of you who have, without bias, studied the two instruments have marked one significant fact—that the verbal alterations and additions made are in more than in one instance designed to constitutionally recognize the State Board of Censors and State Health Officer as the controlling forces of the Association, and to increase their already preponderant powers.

These proposed changes I regard as ill advised, inexpedient, untimely and retrogressive, in that they serve to exaggerate the chief fault and the principal ground for criticism of our Association. Against this reactionary tendency I individually as well as officially protest, and for accomplishing its defeat I ask the aid of all members of the Association who think that we have had in the past a sufficient amount of centralized government and who are willing to now make a stand against any further delegation of authority to those in whom under our present system, the control of the association is largely and inevitably vested.

I recommend that when the proposed new constitution comes before your for action you take careful note of and promptly expunge by adverse vote every word and clause which gives to the College of Counsellors, the State Board of Censors and State Health Officer greater control of the affairs of the Association than are granted them by the present constitution.

The time is opportune for going further than this.

The organization of the Association is at best undemocratic, and includes much that is foreign to the spirit of republicanism. Under the outward semblance of a representative legislative body it contains a skillfully devised oligarchic mechanism which time and experience has shown to be a thoroughly efficient means of keeping power out of the hands of the rank and file of its members, giving the control of affairs to a comparatively small body of office holders, and rendering any changes, distasteful to this governing body, difficult of accomplishment or impossible.

There may have been, in the then existent need for quickly bringing order out of chaos, some justifying reason for the creation many years ago of such an organization as ours, but it is sure that should the body

of gentlemen here assembled now undertake the construction of a State Medical Association, they would produce one differing in some respects from that which we now find ourselves possessed of—or rather —possessed by.

The evils of our present administrative system have given some just cause for complaint and offered a more or less vulnerable point of attack to those who feel themselves slighted or otherwise agrieved, as well as those who are, in principle, opposed to the exercise, by others, of autocratic authority. Not only has our system of organization been made the object of repeated attacks from without, but members of our own body have not spared it criticism; have at one or other time advocated every kind of radical and subversive change, from abolition of the College of Counsellors and House of Delegates to general repeal of our medical law and complete overturn of existing order.

With any such movement of anarchistic or ultra-revolutionary nature I have no sympathy—as little, in fact, as for the equally objectionable tendencies to overgrowth of centralization which confront and endanger us on the other hand.

All of us are probably agreed that "ring rule" is in theory bad and ought not to be tolerated. The practical and real problem is to get something better. This most of us are unwilling to take the trouble to do. We are content to let a few men who are willing to take infinite trouble do our thinking, direct our action and steer the ship of state, only reserving to ourselves the privilege of occasional outbursts of vociferous and oftimes misdirected criticism.

That administrative mechanism which is popularly denounced as a "ring," and its usual accompaniment, the much maligned "boss" are, we must acknowledge, probably necessary features of republican as of all other forms of government, and, after all is said, more objectionable in name than in fact. The duty of the independent minded citizen is not so much that of destroying the ring by a spasm of reform, subsequently sitting idle while a more objectionable one grows up to take its place, but of showing such continuous active interest in his organization; of so exercising his right as to make the governing body to which he delegates the duties of administration really representa-

tive, and of seeing to it that law, custom and long usage do not come in time to deprive him of the privilege of advocating, and if possible, making such changes as may seem to him expedient.

As a conservative first step in decentralization I recommend that the President of this Association, the two Vice Presidents and the members of the State Board of Censors be by constitutional provision, made ineligible for re-election.

This recommendation embodies a principle of representative government which is by students of political science universally recognized as a desirable and proper limitation of the exercise of individual authority; is one which has recently been incorporated in the constitution of our State and one which long usage has already applied to the President and Vice Presidents of the Society.

The practical effect of the enactment of this recommendation into law will be to make our central authority, the State Board of Censors, somewhat more accessible to and amenable to public opinion, and to infuse new life and blood into a body in which under existing conditions, long term of office is taken for granted.

It may be said that we are now under no compulsion to re-elect any officer. No more are we, but precedent and long habit oft times acquires the force of law. This habit we have and should be cured of. At this time it would be regarded by the Censors whose terms may be expiring, and by their friends, as a rebuke—as an intimation of dissatisfaction with their discharge of official duty, should they not be promptly re-elected. The proposed constitutional limitation would do away with the possibility of making a fight against the re-election of any particular individual.

It may also be objected that members of this Association should not be deprived of voting for any man for any office. A moment's consideration of the existing restrictions of the right of suffrage and right of holding office in this Association should dispose of this objection.

It might likewise be urged that we should not willingly deprive ourselves of the privilege of re-electing a good man. Now we fortunately have had none but good men on our State Board. But I hold that good men may properly be sacrificed to good principle.

There is another quite important effect which would result from

the adoption of the recommendation made. It will bring it to pass that the position of State Health Officer and Chairman of the Board of Censors may not be held by the same individual. Should the Association wish to at this time, make no change in the policy of having the State Health Officer a member of the Board, and its Chairman, as well as its executive officer, a clause might properly be added expressly providing that election to the position of State Health Officer shall carry with it membership in the State Board of Censors.

There is much to be said, however, in favor of a change which would leave the State Health Officer free to direct his energies to the multifarious and onerous duties of that position, leaving the general conduct of the Medical Association as such to the Chairman of the Board of Censors, and to other officers.

I submit these recommendations for your consideration. None of them are revolutionary, nor in any way calculated to impair the working efficacy of the organized medical profession.

I believe that their adoption will result in great advantage to the future of this Association.

E. P. Paulmer of Spokane, Wash., has commenced suit against the Northern Pacific Railway Company for money with which to purchase human skin to be grafted onto his injured leg. He asks $80,000 damages, $40,000 from the Northern Pacific Company, and $40,000 from Thomas J. Doyle, yard foreman in Spokane. He alleges that October 15, 1905, he was thrown from the pilot of an engine and his left leg was crushed under the wheels of the train and his back and shoulders were severely hurt. Later he had to have his leg amputated at the thigh. He alleges that the wound never has healed, and that he will have to undergo a second operation. The physicians have taken skin from other persons and grafted upon the stump of his amputated leg. He claims that he cannot have this done again without paying for the necessary skin. This is one ground for his demand for damages. He says he was employed as head brakeman, and that his duty required him to ride upon the pilot of the engine, and that the train was so heavy that it caused the rails to sink slightly and to throw him.

Miscellaneous Notes.

Physicians who prefer to encourage the process of digestion rather than to resort to artificial aid, claim that Seng gives most satisfactory results. Seng acts purely as a secernant to the secretory glands of the alimentary canal; and panax ginseng, the root from which it derives its physiological action has been used for centuries by the Chinese for stomach and all other troubles. Of course, many claims made for it by the Chinese are ridiculous but that it has a specific stimulating action on the secretory glands is generally conceded.

Through considerable experience with Chionia this remedy has convinced me of its sterling merit in the treatment of billiousness and all other hepatic derangements, functional and organic. I have come to regard it as an ideal hepatic stimulant with perhaps a wider range of therapeutic adaptability than any cholagogue medicine I am acquinted with. Perhaps its greatest advantage is the fact that its use is not followed by any reaction tending to induce a sluggish condition of the stomach and bowels, such as follows the use of many other remedies. It is a pharmaceutical triumph.—D. S. Maddox, M. D.

NOTICE TO PHYSICIANS.

A preliminary examination of applicants for appointment in the Medical Corps of the Army will be held at the various military posts throughout the United States on July 31, 1906.

Further information may be obtained from the Surgeon General of the U. S. Army, Washington, D. C. Applications must be filed prior to June 30. The maximum age is 30 years, and persons over that age are ineligible.

CYSTOGEN-LITHIA TABLET.

An effervescing tablet of lithium tartrate 3 grains and Cystogen 3 grains has recently been placed on the market. Insomuch, as the idea of this combination was given us by observing the large number of physicians using Cystogen with Lithia, in Gouty and allied affections, we bespeak for this tablet an extensive use. Put up in packages of three

tubes containing three dozen effervescent tablets. Samples and literature on request. Cystogen Chemical Company, St. Louis, Mo.

SANMETTO VERSUS SUBSTITUTES WITH THE "SAME FORMULAE."

I have used Sanmetto in cases of catarrh of the bladder and enlargement of the prostate gland with great success. In fact, I never saw anything so near a specific. Henceforth I will not be without Sanmetto. Saw-palmetto substitutes with the "same formulae" do not act nearly so well. I therefore with pleasure recommend Sanmetto to the medical profession.

Calis, W. Va. J. L. Sammons, M. D.

SANMETTO VERSUS IMITATIONS.

I have used Sanmetto extensively for the last five or six years in both old and young, male and female, in all forms of irritation of the urinary organs, from nocturnal enuresis in the young to cystitis in the aged, and have been disappointed in but few cases in obtaining good results. Have tried imitations (owing to their cheapness). The results were unsatisfactory. Have returned to the use of Sanmetto as a sheet anchor in both acute and chronic conditions of the urinary tracts. I obtain speedier and more satisfactory results when given four times a day in drachm doses in hot water. T. B. Gullefer, M. D.

Greensboro, Ind.

STRYCHNINE.

In all the diseases of the central nervous system, long before the advent of the dosimetric system. Trousseau and Bretonneau got wonderful results from strychnine in desperate cases of paralysis from softening of the brain—from the lesions and the inflammatory cases as well —of the brain and medulla. They used the same treatment with success in paralysis from lead poisoning, diphtheria, measles, mercury and alcohol poisoning; also the same in facial paralysis and that of the vocal cords and the anal sphinctor, as well as paralysis of the intestines, causing a profound constipation. Dr. Burney Yoo of London always

gives large doses of strychnine in cases of constipation in elderly people ,when he says it is caused by inertia of the bowels that is almost a paralysis.—T. H. Linn, American Journal of Clinical Medicine.

The approach of the national holiday, July 4th, suggests to the surgeon the necessity of preparing to handle cases of cannoncracker wounds and other injuries caused by the explosion of fireworks. Many of these, in the nature of things, will be infected with the bacillus of tetanus or its spores, and will require the most scientific treatment to save life. It is necessary only to review the files of this and other leading medical journals to gather a fair estimate of the enormous sacrifice of life that this country makes every year in celebration of Independence Day, and it behooves every medical practitioner to be prepared to receive and treat each case that presents itself with the best means at his command.

Without repeating the statistical facts that have been cited again and again in support of the prophylactic use of Antitetanic Serum, it is only necessary to say that these facts conclusively prove the value of the Serum as a preventive of tetanus. It is injected in a single dose of 10 Cc. immediately after receipt of the injury, and should be repeated ten days later. The wound is to be thoroughly cleansed, avoiding solutions or agents that coagulate the albumins, and packed with gauze well charged with Antitetanic Dusting Powder. Antitetanic Dusting Powder is Antitetanic Serum dried and powdered and mixed with a suitable quantity of Cloretone. It is recommended by reliable and experienced medical practitioners as a dressing for the wound in all cases in which tetanic infection is suspected. It is practically odorless and keeps well.

Antitetanic Serum and Antitetanic Dusting Powder are supplied by Messrs. Parke, Davis & Co., and may be obtained through all druggists.

THE DRUGGIST AND PROPRIETARY MEDICINE LEGISLATION.

The Committee on Public Policy and Legislation of the State Association are to be complimented upon the strong stand taken with ref-

erence to the enactment of legislation, requiring manufacturers and proprietors of the various nostrums containing narcotic and other poisonous substances to label their products with the name and quantity of such ingredients. In this connection it is singular indeed to note the activity of a few druggists who would represent the State organization in opposing this wholesome measure.

The fact, however, that the manufacturers have been called to their assistance has reflected upon their sincerity, especially since the bill is being given the loyal support of the conservative element of the State Pharmaceutical Association, including the more prominent druggists, who have been associated with that organization from its infancy.

Why any fair-minded pharmacist should offer the slightest objection to this measure which seeks to apply the sentiments expressed in the Ohio poison law (an ideal measure) to proprietary medicines is more than they have so far been able to explain.

The justice of the law is obvious when after two hearings before the committee to whom it was referred, they have unanimously recommended its passage.

We wish to commend those druggists who are making every effort to do their duty in the support of this health measure and sympathize with those who are unable to see the error of their ways. The lateness of the session seems to be the only hindrance to the enactment of the bill.—The Ohio State Medical Journal.

POCAHONTAS HOSPITAL AT JAMESTOWN.

The first building to be completed at the Jamestown Exposition will be the Pocahontas Hospital. Every Exposition has taught the absolute necessity of a well-equipped hospital, under the charge of a competent medical director, with a staff of dependable house doctors and trained nurses. The Pocahontas Hospital is not a very large building, as Exposition hospitals go, but it has been planned to meet every ordinary demand. It has offices for the medical staff, sleeping apartments for doctors, nurses, and the necessary help. There are bright, airy wards, both for male and female patients, and private rooms for such sufferers as may be too ill to occupy cots in the wards and require isolation. In

the basement will be a kitchen, dining room, store rooms, and apart from these there will be installed a first-class heating outfit.

The hospital will contain a room for medical and surgical supplies, a sterilizing room, and an operating theatre, planned and equipped according to the most modern methods. A complete outfit of hospital instruments and appliances will be placed in this building. In this respect, the Pocahontas Hospital will in many ways be superior to any other in the South. The outfit is elaborate in every detail, the manufacturer taking a special pride in this equipment which must of necessity prove valuable to him as an advertisement if it is excellent, while detrimental to him if the reverse were true.

Already a competent corps of resident surgeons and nurses is being congregated. They will live in the hospital, and be ready at any hour of the day or night to care for emergency cases needing attention.

A temporary telephone system will soon be installed, connecting the hospital with all points of the grounds, and an ambulance service, already organized and soon to be put into operation, will answer these calls form a central station in a very few minutes.

The medical director will exercise direct supervision over the work of the medical staff, from each of whom he will receive a daily report, and will have inspectors who will inform him regarding any facts relating to the general sanitation and hygiene of the Exposition grounds These sanitary inspectors will make semi-daily visits to each Exposition building and concession edifice, twice a day rendering their reports, so that any nuisance may be at once abated. The grounds have been placed in a most perfect sanitary condition, well drained throughout; and it will be a part of the medical director's duty to see that this condition is maintained throughout the Exposition period.

FIGHTING THE SCOURGE—EMINENT PHYSICIANS AT JAMESTOWN EXPOSITION WILL EXPLOIT METHODS OF STAMPING OUT TUBERCULOSIS.

By Charles Frederick Stansbury.

Dr. Chas. R. Grandy, of Norfolk, who is the Secretary and Treasurer of the Virginia State branch of the National Association for the Study and Prevention of Tuberculosis, while attending the recent con-

vention of the Association in Washington suggested to that body the advisability of holding their next annual convention at the Jamestown Exposition. He also pointed out to his fellow members the value of giving at the Jamestown Exposition next year an exhibit of methods of prevention and cure of the great scourge. The Association did not, however, see its way clear to changing its hard and fast rule of holding its convention at Washington, not wishing to set a precedent which might cause embarrassment in the future.

Dr. Grandy was, however, successful in getting the Association to agree to install a comprehensive exhibit at the Jamestown Exposition which would be an object lesson to the world concerning the prevention and cure of the world's greatest scourge, tubercular consumption. Unfortunately, the funds at the disposal of the Association are not sufficient to maintain such an exhibit for more than six weeks or two months, unless some fortuitous circumstances should increase the resources in the meantime. A tuberculosis exhibit even for that period at the Exposition, will, however, Dr. Grandy thinks, be of great value to the medical profession and the world at large.

The exhibit will consist of specimens showing different stages of the disease, pictures of rooms used, models and specimens of houses, tents and buildings, etc., used in sanitariums for the cure of tuberculosis. There will be statistical tables, instruments and apparatus used in the cure of the dread disease. Some of these exhibits have already been shown in large cities and their effect in education in the matter of stamping out the disease has been incalculable. The exhibit has been seen by at least 80,000 people and is at present attracting the attention of the thoughtful people at Milwaukee. Millions will see it at the Jamestown Exposition next year.

The National Association for the study and Prevention of Tuberculosis is composed of physicians who do the real work of stamping out tuberculosis throughout the country and of laymen who are deeply interested in the movement.

Forces have been joined by the Association of American Physicians and the National Association for the Study and Prevention of Tuberculosis in a fight against consumption. Both bodies have held meetings

and it was decided that in the future they would work together in combating the spread of the great white plague.

Among the distinguished physicians who are working earnestly in this great cause are Dr. E. L. Truedean, of Saranac Lake, New York; Dr. John L. Morse, of Boston, Mass.; Surgeon General Wyman, of the Marine Hospital Service, and Dr. William Welch, of Baltimore. Dr. Farrand of New York, will go to Norfolk to attend the preliminaries of placing the exhibit and he will have as able coadjutors Dr. James Hunter, of the Norfolk clinic, and Dr. Charles R. Grandy.

DR. KAHLO—PHYSICIAN IN CHARGE OF FRENCH LICK SPRINGS, IND.

(*Editorial in the Indiana Medical Journal, May* 1906.)

Dr. George D. Kahlo, professor of medicine and clinical medicine in the Indiana Medical College, the School of Medicine of Purdue University, and formerly dean of the Central College of Physicians and Surgeons, will remove early in May to French Lick, Ind., where he has accepted a position as physician in charge at the French Lick Springs Hotel and Sanatorium.

To some this announcement may come as a surprise, for Dr. Kahlo has long enjoyed one of the best practices in Indianapolis, but those familiar with his professional work will readily recognize that in this field he will find opportunity for the employment of his particular talent, perhaps even to a greater extent than would be possible here.

We presume it is no exaggeration to say that nine-tenths of the people who visit French Lick go there because of some affection of the stomach, the intestines, liver or kidneys, or are sufferers of a disturbed metabolism, such as gout, diabetes, etc., and these are the diseases to which Dr. Kahlo has devoted his professional attention. He is a member of the American Gastro-Enterological Association, has studied these conditions with some of the masters of the profession in this country and abroad, and has taught them in his college work. He has been interested also in the subject of balneology generally and has made investigations of European and American spas, so that he combines many qualifications for his new work.

He will have associated with him as an assistant Dr. Clarke Rogers, of this city, and a corps of graduate nurses, and will have a complete

equipment for the employment of the usual hydropathic, electric and other treatments usually employed as adjuvants in the management of cases at such places.

We congratulate Mr. Thomas Taggart, the president of the French Lick Company, in having secured the services of so capable a physician as also upon his business acumen in recognizing what is necessary to secure the support of medical men.

Dr. Kahlo has the confidence of the entire profession of the State, and, we have no doubt, will receive very hearty co-operation in his new work. We bespeak for him every success and are glad that his new duties will not interfere with his college work, as also that he intends to keep up his Indianapolis connections by retaining his city office, where he will have regular consultation hours one day in the week.

French Lick, so far as its waters and natural surroundings are concerned, has, we believe, advantages equal to any resort of this class, but little attention has been given to the development of its resources from a scientific standpoint. We believe that Dr. Kahlo will do much to develop this feature, for no one understands better than he the necessities of the case.

CEREBROSPINAL MENINGITIS.

Apropos of the case of meningitis reported in the February Clinic (page 240), I will say that November 10, 1905, I received a hasty call to the country to see a man who was thought to be dying. I drove seven miles through a sea of mud and found an eighteen year old lad lying on a dirty couch in a dirtier room (10x10 feet square). He was unconscious, back and neck ached, and stiff as an iron rod. Clonic convulsions of arms and legs, pupils widely dilated and inactive. He could not speak but could swallow liquids (in small quantities only). Pulse eighty, small but hard. Temperature under the arm 100.2° F., breathing irregular.

Inquiry revealed the fact that he and four others had been cooking, eating and sleeping in this small, dirty room during the past four weeks and as the weather was bad and the floor on the ground, with practically no ventilation, the sanitary condition can better be imagined than described. He had been feeling badly a few days prior to this; headache, stiffness of neck, soreness and aching of muscles, etc.,

but that morning as usual went to work with the other boys and worked until near noon when he raised up (they were picking cotton) and said he heard a noise and told the others to listen. He then fell heavily to the ground without uttering another sound and was carried to the shack in the condition in which I found him several hours later.

I soon decided it was a case of fulminant cerebrospinal meningitis and as I had read and re-read the treatment as outlined in the May, 1905, Clinic I decided at once that I would do the lumbar puncture and give such other treatment as seemed indicated. But I was seven miles from my office and without an aspirating needle; it was late, the roads were bad, it was then beginning to rain and I had other patients to see and was tired and sleepy, so I decided to give him some preliminnary treatment and do the puncture soon next morning. So I gave him twenty grains of calomel in ten doses and directed it given every hour till all were taken, and fixed a two-ounce mixture, each teaspoonful of which contained a granule of defervescent compound (No. 1), two granules; pilocarpine, gr. 1-24; coniine hydrobromide, gr. 1-30; ergotol, ten minims ;water, q. s. Direct, teaspoonful every two hours unless sleeping quietly.

I gave such other directions as to care, etc., as seemed best, and went back home and called up Dr. A. B. Fair and after telling his what I had, asked him to go see the patient with me the next morning. He agreed, and the next morning at nine found us there and we found the patient's condition much the same, except the temperature was 102° F., and vomiting (which had been violently explosive, squirting it through his teeth five feet across room and in my face the day before, and which I failed to mention in its proper place) had ceased. Bowels had not acted and the opisthotonos was as marked as ever. Face, neck and breast were covered with large red spots. We gave him a hypodermic of morphine and atropine and the clonic convulsions becames less marked, but back and neck relaxed not a little bit. We tried for Kernig's sign and found it marked, also the red line after slight pressure.

Dr. Fair agreeing as to the diagnosis and the proposed treatment. We gave him some chloroform and I passed a long slim operating needle into the sac surrounding the cauda equina (puncture made through third lumbar interspace to depth of one and one-third inches) and fluid (slightly turbid), began to flow in a stream. Neither of us

had ever made a lumbar puncture and were at a loss to know how much fluid to take, but remembering to have seen a statement that usually the fluid "exudes in drops" we decided to draw off until fluid began to drop slowly. Needle remained *in situ* twelve and one-half minutes. During six minutes it ran in a stream and during five it dropped from ninety to one hundred and forty drops a minute (90 when we quit). During the other one and one-half minutes I was injecting a one per cent solution lysol (210 minims). We then withdrew needle, and covered puncture with collodion, gave ten more grains of calomel, and continued other treatment and left.

We returned the next morning and to our great surprise found him better. Twelve hours after the puncture he had spoken the first word which he had uttered since the stroke. Fever was gone, pupils contracted and active, bowels had moved freely. Not fully conscious but would respond to a question. Clonic convulsions had ceased, but back and neck still stiff and ached. We introduced needle again and as fluid exuded slowly we only drew off four and one-half ounces and injected another 210 minims of one per cent solution of lysol. Continued the other treatment, except the calomel, and in addition put him on brown iodized lime, gr. one, each hour.

We went away and called again next morning and found him fully conscious, but weak and back still somewhat stiff, but not so badly drawn backward. Gave him some 1-45 grain strychnine tablets and instructed to give one every four hours. Stopped the coniine and defervescent compound, but continued the lime iodized and gave strychnine every three hours.

From that time on improvement was rapid and he soon passed out from under my care and I saw no more of him until January 20, 1906, he came into my office and I did not recognize him until he told me he was "the boy who was dead." I examined carefully and found no trace of what he had gone through. I told him he seemed to me to be as perfect as when God first made him. He said he was glad and would pay his bill, but at the present writing he has not, but lots of others do. "So mote it be."

We have lots of la grippe and pneumonia down here in God's country, and it is bad. Have had an unusual number of most unusual post grippal conditions recently.—F. G. Priestley, in American Journal of Clinical Medicine.